

1. Introduction

1. The Secretary of State appointed us to be the reconstituted Scottish Water Advisory Committee on the 24th January, 1962,* with the function under section 1 of the Water (Scotland) Act, 1946, of advising him on matters relating to his duties under the Water (Scotland) Acts. We held our first meeting on the 9th February, 1962, and have so far met as a full Committee 16 times. In addition, sub-committees which we appointed for specific purposes have met four times. All of these meetings were held in Edinburgh.

2. Our first step was to familiarise ourselves with the facts about the supply and distribution of water in Central Scotland and with the nature of the administrative control at present exercised by local water authorities in the area. For this purpose we tentatively regarded Central Scotland as embracing the Counties of Stirling, West Lothian and Dunbarton (detached) with the burghs in them, together with Clackmannan County and that part of south Perthshire which are or will be linked with Central Scotland by the trunk mains of the Loch Turret Water Board. In this we were influenced by the knowledge that some of the local water authorities in this particular area had already made representations to the Secretary of State about the organisation of the water service in Central Scotland.

3. During our preliminary studies officers of the Department of Health for Scotland (now of the Scottish Development Department) gave us written material, maps and oral explanations which helped us to acquire, more rapidly than would otherwise have been the case, a working grasp of the essential facts about the history, present state and possible future development of the water service in the area. This information was extracted from the extensive records built up by the Department and their predecessors over the long period that, as Central Authority, they have borne responsibility for the administration of water legislation in Scotland; we are indebted to the Department for putting it at our disposal.

4. To supplement the information which the Department gave us, we issued questionnaires to the local water authorities in the area and to some neighbouring authorities, and obtained from them detailed information about the present state of their particular undertakings and estimates of their water needs during each of the decades of the next thirty years. In addition, we invited these authorities, the three associations of local authorities, and professional, representative, and other bodies having an interest to give us written evidence on the subject of our remit: a general invitation to the same end was extended to the public through the Press.

5. Two important facts seemed to spring out of the written evidence which we received. First, it became abundantly clear that it would be unrealistic to restrict our investigation to the problem in Stirlingshire, Dunbartonshire (detached) and West Lothian to the exclusion of neighbouring areas in the industrial belt where similar problems exist and where the increasing demand for water will almost certainly have to be met by the joint development of

* Mr J. C. O. Burns, O.B.E., formerly Chief Engineer of the Department of Health for Scotland, was appointed to be a member of the Committee as from 1st April, 1962.

new sources. Secondly, with but few exceptions, the written statements revealed a massive weight of opinion among local water authorities and other bodies in favour of the creation of a system of regional boards across the industrial belt, either for the bulk supply of water or for both supply and distribution.

6. This led us to reconsider the tentative definition of Central Scotland which we had adopted for the purpose of our remit, and we decided to extend our investigation to cover, in all, the Counties of Dunbarton, Lanark, Stirling, the southern part of Perthshire, Clackmannan, Kinross, Fife, West Lothian and Midlothian and the burghs in these counties, together with Edinburgh and Glasgow. We reported this decision to the Secretary of State on the 22nd June, 1962. The extension of the area was announced in the Press of the 3rd July, 1962, and interested bodies were again invited to submit evidence.

7. One effect of this decision was to exclude from the scope of our investigation the Counties of Ayr and Renfrew in the west and East Lothian in the east which had formed the opposite extremities of the area covered by the representations made to us. No doubt the problems of water supply and organisation in the Counties of Ayr and Renfrew are similar to those in other largely industrial counties and could be solved on broadly similar lines; but these areas, which are peripheral to Central Scotland, depend at present on the development of different sources for their water supplies, and their problems could best be dealt with separately. We did not think it necessary to include East Lothian because here again the county lies on the edge of the industrial belt with a mainly rural economy and, moreover, it already enjoys a closely integrated water system independent of the sources of supply for Central Scotland.

8. We obtained from the authorities of the added areas, as we had done from the authorities of the areas initially included in our investigation, detailed information about their particular undertakings, with estimates of their future water needs, and written evidence on the subject of our remit. Later, we received oral evidence from some local water authorities and from certain other interested bodies. A list of all who submitted evidence, written or oral, is given in Appendix I.

2. Policy and Administration

9. In approaching our task we naturally took note of declared Government policy relating to the administration of the water service, of the legislation passed to make this effective and of the extent to which the aims of policy have so far been achieved.

10. There has been talk for a long time of the need for larger water supply areas in Scotland. In 1934 the Committee on Scottish Health Services, in an interim report, noted that there were several hundreds of separate water undertakings in the country and that, although there was some co-operation among them, in general each secured a supply for its own area without reference to the needs of other areas. The Committee said that larger areas of supply, to be achieved by combination, co-operation or other means, were essential to secure a reasonable distribution of the ample water supplies of Scotland. Two years later, in their final report, the Committee specifically recommended

the abolition of special districts for environmental services in county areas, including special water supply districts, on the ground that they had in general outlived their usefulness. The principle underlying the formation of a special district—an area specially carved out of the county in which a service was to be provided—was that the service being purely local, the cost should be borne by the district itself by means of a special district rate. The Committee pointed out that in predominantly industrial counties most of the services had been provided for such a large part of the county as to make it comparatively easy to abolish all the districts and make the services a county charge. This recommendation was at length implemented as regards water supply by the Water (Scotland) Act, 1949, under which almost 400 special water supply districts, including about 100 in Central Scotland, disappeared.

11. The views of the Committee on Scottish Health Services were reinforced from other sources. In a report on Rural Housing in Scotland submitted in 1937, the Scottish Housing Advisory Committee strongly recommended that the Department of Health for Scotland should institute measures at the earliest moment to bring about so far as possible the regional control and development of water supplies in rural areas and that, where necessary, compulsion should be used to secure co-operation by adjoining local authorities. In a subsequent report submitted in 1944 on "Planning Our New Homes" the same Committee endorsed their previous recommendation "in the strongest terms." Next, between 1943 and 1946, the Department of Health for Scotland carried out a comprehensive engineering survey of Scotland's water resources and undertakings which showed that one of the most unsatisfactory features of the water service had been the lack of co-operation among undertakers, particularly when new works were being provided, and that there was ample room for amalgamations between authorities for the large-scale development of sources and for distribution. Other contemporary reports by professional and representative bodies and the views expressed by some of the more progressive local authorities showed a growing realisation that the water service could be developed efficiently in the national interest only through regional effort.

12. These views were reflected in a White Paper outlining post-war water policy which was issued by the Government of the day in 1944 (A National Water Policy: Cmd. 6515). This Paper laid it down that the object of policy must be to make the best and most economical use of the country's water resources. It acknowledged the achievements of the water service in Scotland up to that time in giving the country almost complete immunity from water-borne disease and in providing the majority of the population with an adequate supply of water. Some of the individual undertakings, the Paper said, had indeed achieved a high standard of efficiency of which they were justly proud. But it went on to point out that, largely because the service had grown up piecemeal without any effective co-ordination, there were serious defects, and it noted some of the defects brought to light by the Department's engineering survey then in progress:

"In many cases different undertakings have laid parallel mains in the same road. In other cases trunk mains have been carried through villages having no public water system without any supply being given off. This has resulted in the setting up of a multiplicity of small undertakings when the needs might have been met with greater economy and efficiency by combination. In some cases also, the operation and the supervision of

small undertakings have, because of limited resources, been left in inexperienced hands. . . . Many of the smaller water supplies are inadequate at any time and seriously inadequate in dry spells; . . . As often as not these faults are the result of past failure to foresee the benefits of co-operation in bigger and more efficient schemes."

In such circumstances, the White Paper observed, the case for joint action by neighbouring undertakers, preferably in agreement but if necessary by the use of compulsory powers to be vested by statute in the Secretary of State, could hardly be overstated.

13. Statutory effect was given to the new policy by the passing of the Water (Scotland) Act, 1946. The power of voluntary combination which local authorities had under previous legislation was maintained by section 16(1) of the Act under which two or more local water authorities may, with the consent of the Secretary of State, combine for any of the purposes of any enactment relating to the supply of water on terms and conditions agreed between them. In section 16(2) the Act broke new ground: this gives power to the Secretary of State to make an order combining local water authorities compulsorily. Before making such an order, however, the Secretary of State must publish it and hold an inquiry into objections lodged against it: and in the event of sustained opposition the order must be confirmed by Parliament before it can become effective. There are, therefore, ample safeguards against the arbitrary use of the compulsory powers.

14. In an explanatory memorandum published after the Act was passed, the Department of Health for Scotland said that it would be the Secretary of State's policy to continue to encourage voluntary co-operation between authorities; but that he might find it necessary to use his new powers of compulsory combination where it was in his judgment essential in the public interest to secure an efficient and economic water supply of proper quality and quantity which could not otherwise be achieved.

15. As it is now nearly 20 years since this policy was formulated we felt obliged to look briefly at developments in water administration in the interval, and to consider whether what was laid down in 1944 is still valid today. A fair measure of rationalisation of water supply and distribution systems has in fact taken place since the Department made their water survey. Some 25 outline schemes based on the survey were issued to the local water authorities concerned and 19 of these were large regional schemes for the development of a common source on behalf of a number of authorities. Some of these regional schemes are now in operation in rural areas where before the war there were inadequate village supplies. This development has been assisted by the abolition of the large number of special water districts mentioned in paragraph 10 and county authorities have tended to promote large schemes with considerable reserves from which temporary supplies can be made available to small burghs in the county. The overall position now is that about 97 per cent. of the population of Scotland have a piped water supply available; taking the rural areas separately, where about £32m. has been spent since the war on new schemes and improvement work, some 90 per cent. of the population can be served by a piped supply. For these reasons the regrouping of local water authorities in Scotland has not so far needed to be pressed as it has been in England and Wales where, we understand, the number of water undertakings has been substantially reduced since the war, the Minister having frequently used his

compulsory powers to secure combinations. Some authorities in Scotland have combined to develop common sources and a few have combined voluntarily to form joint water boards, but so far there has been no Scottish instance of compulsory amalgamation by order of the Secretary of State.

16. We hope that this immunity from compulsory combination in Scotland can continue. Whether it does so will no doubt depend on the readiness of authorities to co-operate for the execution of the large-scale water developments that lie ahead. The past 20 years have seen a widening of the water supply areas for the most part to the county boundary and the drawing together in greater or lesser degree of the authorities within the county for joint action. But if the water service is to develop efficiently in the future more than this will now be needed. With the demand for water for all purposes progressively rising and with the number of inlying sources left to meet it rapidly dwindling, local water authorities will be forced to rationalise their existing supplies and to undertake the costly development of larger and more distant sources. This must, in our view, involve joint action not merely by local authorities in a single county but in certain cases by counties in combination. *We therefore endorse the policy adopted in 1944: where joint action by neighbouring authorities is necessary or desirable every effort should be made to secure it by agreement, but if this fails the Secretary of State should not hesitate to exercise his powers to enforce it in the public interest.* What follows in this report rests on a full acceptance of that policy.

3. The Existing Water Service in Central Scotland

THE ADMINISTRATIVE STRUCTURE

17. There are in Central Scotland, as we have defined the area, 61 local water authorities serving a total population of about 3,200,000, although in practice the prime responsibility for water supplies in the area is in the hands of only 53 of these authorities. To give an account of the growth and present state of the various undertakings belonging to these authorities would burden this narrative unduly with detail and might blur the essential facts of the situation in Central Scotland as a whole. We have therefore extracted from the information supplied to us by the authorities the basic data about each undertaking and have tabulated it in Appendix II. Where special features require to be noticed they are brought out in the text itself. We have also reproduced in Appendix IV a map depicting the sources and principal pipelines that supply the area.

18. The local water authorities in the area with which we are concerned comprise the councils of 37 small burghs, the councils of 6 large burghs, 7 county councils, 8 joint water boards and joint committees (consisting of local authorities who have combined for the exercise of water supply functions), the Corporation of Edinburgh (including the County of Midlothian and the burghs in it), the Corporation of Glasgow (within whose statutory limits of supply are certain neighbouring burghal and landward areas) and the Corporation of Dundee who supply a small part of north-east Fife. This means that the water service in Central Scotland—as indeed throughout the rest of the country—is wholly a public service. It has grown under local and public general legislation

since the beginning of the nineteenth century essentially as a responsibility of town and county councils, and its administrative structure rests for that reason on local government foundations. Broadly, the boundaries of the local water authority areas coincide with the local government boundaries except for an occasional overlap resulting from a boundary adjustment or for relatively minor deviations for purely local supply reasons; so that allowing for the few combinations that have taken place, the number of local water authorities is only slightly less than the number of local authorities in the area.

19. The local government origins of the water service also explain the size of its component parts. Just as there is a wide range in the size of the town and county council areas so also the size of the water supply areas in Central Scotland varies. Expressed in terms of population, Glasgow with 1,200,000 and Edinburgh (including Midlothian) with 580,000 are the largest, and the Burgh of Abernethy with only 600 is the smallest: between these extremes, the remaining areas lie mostly in the lower brackets of the scale. The figures are these:

<i>Population</i>	<i>Number of local water authorities</i>
Over 1 million	1
500,000 to 1,000,000	1
250,000 to 500,000	1
100,000 to 250,000	3
50,000 to 100,000	4
20,000 to 50,000	6
10,000 to 20,000	9
1,000 to 10,000	26
Under 1,000	2

Expressed in terms of water consumption, the contrast in the size of local water authorities is equally striking. The largest—the Corporation of Glasgow—meet a present demand of nearly 100 million gallons per day*; the next—the Corporation of Edinburgh—meet a demand of nearly 40 m.g.d.; while at the other end of the scale, there are no fewer than 34 local water authorities each of which meets a demand of under 1 m.g.d.

20. Besides size, local water authorities differ in the manner in which they carry out their statutory functions: and this in turn affects the shape of the administrative structure in different districts. The Water (Scotland) Act, 1946, allows a certain latitude in the way in which authorities may discharge their duty to supply their districts with water. They may do so "by themselves providing such supplies or by securing the provision of such supplies by another local authority or by a joint water board or otherwise." The majority of authorities provide their own supplies but the different methods are all in use in Central Scotland, and the effect is best seen by looking broadly at the administrative structure that has developed in each part of the area.

The Cities of Glasgow and Edinburgh

21. The Corporations of Glasgow and Edinburgh, both financially strong, have in the past shown great foresight by developing distant major sources to meet the needs of their large populations. Both are responsible from source to tap for supply and distribution throughout their respective areas. The Glasgow

* Throughout the remainder of the report the term "million gallons per day" is indicated by the contraction m.g.d.

area of supply, which gets the bulk of its water from Loch Katrine, includes the whole of the City, parts of the Burghs of Rutherglen, Barrhead, Renfrew, Milngavie and Bearsden, and areas in the Counties of Lanark, Renfrew, Stirling and Perth. Edinburgh Corporation get the greater part of their water from Talla and they supply and distribute not only within the City boundaries but also in the landward area and the five small burghs in Midlothian; one-third of the members of the Edinburgh Corporation's Water Committee are nominated by the County Council and the five Town Councils, who have ceased to be separate local water authorities. These are examples of one authority discharging duties under the Water Acts on behalf of others; in neither case does the arrangement constitute the formation of a joint water board, although as we say in paragraph 158 both Corporations are already operating on a regional basis.

West Lothian County

22. The County Council and the town councils of four of the six small burghs in the County combined in 1958 to form the West Lothian Water Board which was joined by the council of a fifth burgh in 1961. The Board now serves a total population of 88,000 and is responsible as a source-to-tap board for both supply and distribution within the whole of the County, except in the remaining Burgh of Bo'ness where the Town Council are the local water authority.

Fife County

23. The story is different in Fife, where there are no fewer than 21 separate local water authorities supplying water to a population of about 330,000. The largest is the Fife County Council undertaking which supplies and distributes in the landward area of the County and in six small burghs with a total population of 151,300. Next, there are 13 local water authorities (consisting of the councils of two large burghs and eleven small burghs) who are each responsible for supply and distribution in their own area, and serve a total population of about 160,000. Two small joint water committees supply four small burghs with a combined population of 8,200, the town council of each burgh being responsible for distribution within their own area. The remaining local water authority is the Corporation of Dundee—outside the County altogether—who send water across the Tay Bridge to two small burghs and the surrounding landward area on the Fife side of the estuary with a population of about 7,000. Expressed in other terms, the area of the County is 505 square miles, of which 475 square miles are supplied with water by the Fife County undertaking and the remaining 30 square miles by the other 20 undertakings in the County.

Stirlingshire and Dunbartonshire (detached)

24. For the present purpose Dunbartonshire (detached) is taken with Stirlingshire since at the moment it derives the whole of its water from Stirlingshire sources. There are in this whole area nine local water authorities with a total population of 220,800, each responsible for supply and distribution in their own area. Of these, the Stirlingshire and Falkirk Water Board is the biggest and most important. This Board's area of supply covers the eastern part of the landward area of the County and the large burgh of Falkirk with a total population of 103,000. Two local water authorities are county councils—Stirling County

Council responsible for the western part of the landward area of the County with a population of 19,000, and Dunbarton County Council responsible for the landward area of the detached portion of Dunbarton County, including the new town of Cumbernauld, with at present a total population of 12,000. This is likely to increase substantially with the growth of Cumbernauld. The remaining six local water authorities comprise the town councils of one large burgh with a population of 27,000, and of five small burghs with a total population of 59,800, of which Grangemouth with 18,900 and large industrial plants within its boundaries is the most important from the water supply point of view.

Perth, Clackmannan and Kinross Counties

25. There are six local water authorities in that part of Perthshire covered by our investigation, namely, Perth County Council and the town councils of five small burghs. The estimated population of the landward area for which the County Council is responsible is 28,500 and the combined population of the five small burghs is 12,800.

26. In Clackmannan County there are five local water authorities—the County Council and the town councils of four small burghs. The total population is 42,000. In Kinross there are two local water authorities—the County Council for the landward area with a population of 4,300 and the town council of one small burgh with 2,400.

Dunbarton County

27. We have already dealt with the detached or eastern part of this County. There are seven local water authorities in the western part of the County with a total population of 154,400. The largest, with 58,000, is the Clydebank and District Water Trust which supplies and distributes in Clydebank and adjacent landward areas. Next is the County Council undertaking which supplies and distributes in the western part of the landward area of the County with a population of 35,000. The remaining local water authorities in this part of the County are the town councils of one large and four small burghs with a total population of 63,000; of these, the Burghs of Bearsden and Milngavie are for the most part supplied by Glasgow Corporation and the Clydebank and District Water Trust.

Lanarkshire

28. This is the largest county in Central Scotland with six local water authorities serving a population of about 530,000. Of these the County Council's water undertaking serves a population of 289,000 in the landward area of the County. The Airdrie, Coatbridge and District Water Board supplies a population of 113,000 in the Burghs of Airdrie and Coatbridge and in the neighbouring landward area. Next in size are the local water authorities of the Burghs of Motherwell and Wishaw and Hamilton with populations of 75,000 and 41,000 respectively. The remaining two local water authorities are the town councils of two small burghs with a total population of about 10,000.

29. This statistical account shows in broad outline the shape of the existing administrative structure in the area as a whole and the variety that exists from

district to district. In Midlothian and West Lothian there is complete or almost complete administrative integration: in Fife, Kinross, Clackmannan and Perth, apart from the Fife County undertaking itself, there is a proliferation of small local water authorities each independent in its own area: between these extremes the structure in Stirlingshire, Dunbartonshire and Lanarkshire reveals varying degrees of mixed administration, partly by joint bulk supply or source-to-tap boards and partly by individual local water authorities. So far as there is any over-all administrative pattern in the area it is that in most parts of it there is a larger or smaller nucleus of authorities amalgamated in joint water boards.

30. The joint boards already named—the Airdrie, Coatbridge and District Water Board, the Clydebank and District Water Trust, the Stirlingshire and Falkirk Water Board and the West Lothian Water Board—are, as we have indicated, source-to-tap boards responsible for both supply and distribution within their respective areas, though some of them, notably the Stirlingshire and Falkirk Water Board, also supply water in bulk to neighbouring local water authorities. Apart from these Boards there are two joint boards which supply in bulk only and have no responsibility for distribution. The first is the Daer Water Board which was formed in 1951 by the joint action of all the larger water authorities in Lanarkshire and delivers bulk supplies to each of them as constituent members. The other is the Loch Turret Water Board formed in 1958 by Perth County Council, Clackmannan County Council and Grangemouth Town Council for the bulk supply of water within prescribed limits to their respective areas.

SUPPLY AND DISTRIBUTION

Piecemeal Growth of Water Service

31. When first we approached the problem of the physical supply and distribution of water in Central Scotland what struck us most was the bewildering network of trunk mains and pipelines that lie across the area. One has only to glance at the map at Appendix IV to see that these mains could not possibly have been laid to conform with any rational over-all plan. All too clearly there is evidence that the system is the result, not of co-ordinated planning, but of piecemeal growth. We suspect that the passage in the White Paper of 1944 quoted in paragraph 12 was largely based on the conditions prevailing in the central area. At all events we think it necessary to supplement what is said in that passage with a few examples of the defects that have resulted there from the absence of co-operation among authorities in the past. But we disclaim in advance any intention of criticising authorities for their failure to foresee where their unco-ordinated action would lead. Indeed, we endorse the White Paper's acknowledgment of the solid achievements of some of these authorities in providing a wholesome and efficient water supply for their own people—which was their primary duty. Moreover, it may be that the separate development of sources which in some cases one can now see to have been short-sighted or self-interested was not so in the different circumstances existing when the projects were undertaken and a duplication of services in particular instances may have been the only possible way of augmenting an inadequate supply. All we now seek to do is to highlight some of the anomalies arising from past development in order the more clearly to focus what should be done to rationalise the service for the future.

32. The most obvious defects are the physical ones—trunk mains belonging to different authorities laid in the same road or crossing each other at various points, and mains belonging to one authority carried through the area of another often without giving off supplies to communities in need of water. This piecemeal development obtrudes itself noticeably in Lanarkshire with its close concentration of larger authorities who, prior to the formation of the Daer Water Board, had acted separately to meet their needs. Thus Motherwell and Wishaw Town Council and the Airdrie, Coatbridge and District Water Board have mains in the same road from Symington to Carlisle: so also have the Water Board and Lanark County Council in the road from Newmains to Newhouse: and so too have Hamilton Town Council and the County Council in the road from Strathaven to Hamilton. In one part of the County between Lanark and Carlisle the mains of no fewer than four authorities—Motherwell and Wishaw Town Council, Airdrie, Coatbridge and District Water Board, the County Council and the Daer Water Board—if not laid in the same road traverse the same district. The same anomalies exist in other counties. In Perthshire, Fife County Council and Dunfermline Town Council have laid mains in the same road between Glendevon and Powmill. In Fife, mains belonging to the County Council and to Kirkcaldy Town Council pass over the same district between Leslie and Kirkcaldy; and the County Council's trunk mains cross the pipelines of most of the other authorities in the County. Areas between Stirling and Falkirk are traversed by mains belonging to the Stirlingshire and Falkirk Water Board and Grangemouth Town Council, as is the Calder district of Midlothian by mains of Edinburgh Corporation and mains belonging to the West Lothian Water Board. In Dunbartonshire, trunk mains from the County Council's Finlas reservoir and from Dunbarton Town Council's pumping station on Loch Lomond are laid side by side in the Leven Valley. In this County, too, Dunbarton Town Council and the Clydebank and District Water Trust have reservoirs on the same watercourse, the Town Council having harnessed the upper reaches and the Trust having built a reservoir lower down, with the result that compensation water from the Town Council's reservoir must pass through the Trust's reservoir and be discharged by the Trust along with their own. This duplication and overlapping, of which other examples could no doubt be quoted, is eloquent proof that the system as a whole has not been developed along the most efficient and economical lines. There has been needless heavy expenditure on capital works which is now beyond redress; but some of the burden of maintenance and management which remains could be shed and further duplication and anomalies avoided if the administrative control were rationalised.

Interdependence of Local Water Authorities

33. The next feature of the system which attracted our notice was the extent to which administratively independent local water authorities are dependent on others for their supplies: a large number of authorities give off supplies to neighbouring authorities or receive supplies from them, and occasionally the flow is both inward and outward. This is common in Stirlingshire, Dunbartonshire, Lanarkshire and Fife.

34. In Stirlingshire, the interdependence of authorities is particularly marked. The Stirlingshire and Falkirk Water Board has from its inception

followed a far-sighted policy of developing sources in excess of the immediate needs of its own area in East Stirlingshire and Falkirk and has therefore had a surplus available for bulk supplies to neighbouring authorities in need. Thus out of total net resources amounting to about 23 m.g.d. the Board supply up to 8 m.g.d. to Grangemouth Town Council (about 80 per cent. of the Burgh's present consumption), 1.83 m.g.d. to Stirling County Council for the western part of the County (almost 100 per cent. of the area's supplies), 0.3 m.g.d. to Denny Town Council (37 per cent. of the Burgh's supplies) and 2.05 m.g.d. to Eastern Dunbartonshire (100 per cent. of the supplies in the landward area of this detached part of the County), and in emergency the Board has helped the Town Councils of Stirling and Kirkintilloch. In effect this means that with the exception of the Town Councils of the small burghs of Kilsyth and Bridge of Allan there is no local water authority in Stirlingshire and Dunbarton (detached) which is not to some extent dependent on the Board for supplies. On the other hand Grangemouth Town Council, themselves substantially dependent on the Board, in their turn give off 1 m.g.d. to Stirling Town Council: they also give to the Board at Torwood 0.5 m.g.d. in exchange for an equal amount at the Grangemouth burgh boundary. And as a tail-piece, we quote the following from the Board's written evidence:

"Stirling County Council has agreed to provide up to 500,000 gallons per day to Kirkintilloch in time of drought so long as the County Council have this quantity available. This water is made available by the County Council from their Lennoxton and Milton area. The County Council is wholly dependent on the Board for their own supply and, remotely placed as they are in the Lennoxton and Milton area, this water is carried to them through mains laid in Dunbartonshire (detached) by Dunbarton County Council. Accordingly, there are 4 authorities concerned in keeping Kirkintilloch supplied in time of drought when there need only be one."

35. In the other counties there is the same pattern of interdependence among authorities, though the amounts of water involved are not so great. Lanark County Council have an entitlement to 1 m.g.d. from the Corporation of Glasgow and some minor supplies from other authorities: they give off small supplies to the Town Councils of Lanark and Motherwell and Wishaw and to the West Lothian Water Board. Dunbarton County Council who, as already stated, receive 2.05 m.g.d. from the Stirlingshire and Falkirk Water Board for the eastern (detached) part of the County, give off a small supply to Dunbarton Town Council in the western part. In Fife, the County Council reserved 1.5 m.g.d. for Dunfermline Town Council and 0.43 m.g.d. for Inverkeithing Town Council (although so far these supplies have not been fully taken up): in addition they give off small supplies to Perth and Kinross County Councils and exchange small supplies with Kirkcaldy Town Council.

36. We have no wish to exaggerate the importance of this phenomenon of give-and-take among local water authorities as a factor to be taken into account in the rationalisation of the water system of Central Scotland. Clearly, the circumstances vary in different parts of the area; in some districts interdependence is by itself of little significance: but in others, notably in Stirlingshire, it is a factor which cannot possibly be ignored. What is of general importance, however, is that interdependence and the existence of the network of trunk mains and pipelines to which we have referred indicate that the water supply

system in this part of the country is physically an integrated system or could readily be made so. This is a vital consideration from the point of view of the rationalisation of the administrative structure.

Unused reserves of water

37. Two points emerged at this stage of our investigation which we think call for consideration if the most effective and economical use is to be made of available sources of supply. The first relates to the reservation of supplies, by formal agreement or otherwise, whereby an authority are secured in a specified supply whether or not at any particular time they need it. Because of this practice situations can and do arise in which an authority hold surplus supplies while another authority in need cannot draw upon them. We deal later (paragraphs 162-168) with the difficulties that arise out of agreements which, regardless of changing circumstances, impose obligations or confer rights "in perpetuity," including obligations and rights leading to this practice of reserving supplies. In the meantime we record our strong view that the inflexibility that prevents reserved water from being used to the best advantage when and where it is needed by an authority other than the authority for whom it is reserved (but who do not immediately require it), has impaired the efficiency of the service in the district and has militated against the public interest.

Uneconomic use of water

38. The second point concerns the uneconomic use of public water supplies. The Federation of British Industries told us that one of the questions included in a sample survey which they were good enough to make of their members in Central Scotland—and indeed in other parts of the country—was designed to elicit, within necessarily broad limits, to what extent industry felt that it was essential to use water drawn from the public supply for particular industrial purposes, and how far such supplies could be replaced from other sources if these could be made available. A total of 74 companies in the central area answered this question and, of these, 60 said that over one-half and 14 said that under one-half of the water they took from the public supply could be so replaced. After making reservations about the particular needs of some companies, the Federation added that "it seems significant that in Central Scotland with its known deficiency of water generally in certain counties, a preponderance of companies stated that an alternative source of water if it could be made available would satisfy their needs to a greater or less degree. It would seem broadly that to this extent a demand is being or could be placed upon domestic supplies which could be satisfied in other ways." We attach importance to the Federation's evidence on this matter. We recognise that some industrial processes depend on the use of high-quality water such as is normally obtainable only from the public supply mains. We must express our concern, however, that supplies of treated water, even though small in relation to the total consumption in an authority's area, are being used in industry for cooling and other purposes for which treated water from public sources is not required. We have been told that in such circumstances it may not always be possible for industry to switch its demand to another source even where one is available, since the difficulties and expense involved in duplicating mains may be so disproportionate as to make a change impracticable. But, standing this limitation, there may still be scope for reducing the uneconomic or unnecessary

use of treated water for industrial purposes, and whatever steps can be taken in this direction should be taken in the public interest. *We therefore recommend that local water authorities should be asked to make an early and exhaustive survey in their respective areas with the object of minimising the use of treated water in this way.*

39. The British Waterways Board were good enough to supply us with detailed figures about the capacity of the canals in Central Scotland under their control, the extent to which supplies of water are at present given off from these canals to canalside industrial users, and about the substantial upward trend in the use of canal water for industrial purposes which the Board expect is likely to develop. The figures with regard to abstractions showed that in 1961, all but 8 per cent. of the supplies drawn off by industry (about 42 m.g.d.) were returned to the canals. In summing up future possibilities the Board said that "substantially the whole of [their] water resources are being used or are bespoken under agreement for industrial supplies but . . . provided the water abstracted is returned without loss, further industrial supplies could be afforded from existing . . . resources." The capacity of the canals to carry water is by no means exhausted and the Board indicated to us their willingness to assist local water authorities in connection with the distribution of supplies for industrial purposes.

4. The Present and Potential Demand for Water

40. We were enjoined in our remit to examine the administration of the water service in Central Scotland "in the light of present and potential demands", and we now turn to this aspect of the problem.

41. We give detailed information about the local demand for water in Appendix II. This sets out particulars about the population of each area, its present water consumption and reserves, and its estimated future requirements in 1971, 1981 and 1991. We have related the estimates to these three years for two reasons. First, the planning and construction of headworks and trunk mains to bring water to an area from a distant source of supply is necessarily a long-term project sometimes requiring several years to complete; and secondly, experience gained from existing schemes shows that reserves formerly thought to be sufficient for some 20 or 30 years have in post-war years been taken up much more rapidly than was expected.

THE RISING DEMAND FOR WATER

42. In general, the picture presented by the figures in Appendix II is one of a rising demand during the next 30 years. The demand for water has indeed been steadily rising in the central area for some time and the growing shortage has been giving the responsible authorities cause for concern. Before the war most of the local water authorities in the area could meet their needs from upland sources which, on the whole, were near at hand and relatively cheap to develop. But since the war the demand for all purposes has greatly increased. The large new housing areas which are being developed create fresh demands not only in new places but, with the improved sanitary facilities now available,

on an increased scale. This demand will build up progressively with the migration of overspill population from Glasgow and the growth of the new towns at Cumbernauld in Dunbartonshire, with a present population of about 5,000 and a designated population of 70,000, and at Livingston astride the West Lothian and Midlothian border, also with a designated population of 70,000.

43. The potential demand for industry is more difficult to assess. Before the war, industries using large quantities of water usually satisfied their needs by abstracting from rivers, streams, canals, wells or boreholes. On this, the Federation of British Industries told us that they found that the companies covered by their survey still rely to a relatively small extent (about one-fifth) upon public supplies. The Federation were understandably guarded about future industrial needs since these will depend on imponderables such as the extent of the development of existing industry and the demands of new industries. They said that their survey appeared to show that a shortage exists in Glasgow, Lanarkshire, Stirlingshire and West Lothian which is, however, marginal when expressed as a proportion of the total demand in the area, and that the future demand is expected "to rise by a larger but still marginal degree." But while this is the only safe conclusion which the Federation felt that they could draw in general, they stressed the fact that for individual firms the need for more water now and in the future could in certain circumstances prove serious. Evidence from other sources supports this. Consumption by new industries, particularly chemicals, and by new industrial processes carried out at extremely high temperatures and requiring large quantities for cooling purposes, is commonly very high by normal local water authority standards and can rarely be provided for out of reserves. Experience in the central area since the war confirms the view that substantial demands for water can arise from particular industries. For example, Grangemouth Town Council told us that with the considerable expansion of the oil and associated industries in the town their supply had been augmented from the pre-war figure of 2 m.g.d. to 12.5 m.g.d. with further augmentation contemplated, and that at present 80 per cent. of the available supply is given off for industrial use with the prospect that this will increase to approximately 90 per cent. Similarly, the West Lothian Water Board said that the expansion of industry in its area coupled with the demand for additional houses, schools and other facilities had imposed a severe strain on its supplies and that augmentation from a new major source is urgently necessary. These examples illustrate the Federation's evidence that the needs of particular industries can be serious, and underline the urgent need from the point of view of the national economy that the efforts being made to attract new industries to Scotland should not be impeded by the lack of water when and where it is needed.

44. The figures given in Appendix II are the best quantitative indication we could get of the present consumption and of the rising demand for water in the area. It was not surprising that, faced with the request to estimate their needs as far ahead as 30 years, a few of the authorities should over-shoot and a few should fall short of what could be regarded as a reasonably accurate figure. Where estimates were obviously wide of the mark they were adjusted for us by Engineering Inspectors of the Scottish Development Department in agreement with the local water authorities concerned.

45. The total consumption of water for all purposes in the area is some 230 m.g.d., and available reserves amount to 44 m.g.d. Local water authorities

estimate that they will need 289 m.g.d. in 1971, 336 m.g.d. in 1981 and 380 m.g.d. in 1991. These estimates show an expected annual increase in the demand for water over the area of almost 5 m.g.d. and we are satisfied that this figure, based as it is on an average rate of increase of 2.14 per cent. per annum, is not over-stated. The following breakdown of these figures shows where the increasing demand lies as between county groupings and when the local water authorities think it will be felt:

Groupings	Total Consumption 1961 m.g.d.	Reserves 1961 m.g.d.	Estimated Future Consumption		
			1971 m.g.d.	1981 m.g.d.	1991 m.g.d.
Glasgow Supply Area . . .	94.71	(-) 2.01	104.00	113.00	122.00
Dunbartonshire . . .	12.99	6.32	17.66	21.50	24.86
Lanarkshire . . .	35.70	16.10	44.33	53.56	63.97
Stirlingshire & Clackmannan	26.61	11.35	42.23	51.01	54.27
Perth County . . .	0.87	3.14	2.37	3.50	3.61
Fife & Kinross . . .	18.67	5.04	26.94	32.44	38.99
West Lothian . . .	5.65	(-) 0.16	12.83	17.90	25.00
Edinburgh & Midlothian . .	35.00	3.00	39.00	43.00	47.00
Total . . .	230.13	43.68	289.36	335.91	379.70

46. As will be seen the rising demand for water extends to all parts of the central area although augmentation is more urgently needed in some districts than in others. It is needed at once in West Lothian and Glasgow and in Dunbartonshire for the new town of Cumbernauld and will be needed before 1971 in Edinburgh (including Midlothian), Fife, Kinross, Stirlingshire and Clackmannan. Thereafter, additional supplies for Lanarkshire must closely follow. The figures given for a particular grouping naturally mask differences in the needs of individual authorities within that grouping. For example, in Fife, Kirkcaldy Town Council have no reserves even now, while Dunfermline Town Council estimate that their present reserves will still be sufficient to meet their needs beyond 1981. Similarly, Perth County Council and the town councils of a handful of small burghs throughout the central area estimate that they will not need additional supplies before 1991. But these variations do not materially affect the general picture, namely, that the rising demand for water for all purposes in the central area will require the present resources to be augmented substantially during the next 20 years.

SCARCITY OF NEW SOURCES

47. Not only is there a rising demand for water in Central Scotland, there is also an increasing difficulty in obtaining new sources of supply. We are advised that very few worthwhile catchment areas in this part of the country are still undeveloped; that the era of developing small local sources in the haphazard fashion of the past has gone; and that the stage has now been reached when authorities requiring additional supplies must go farther afield to get them. This all-important factor will compel local water authorities to co-operate to meet a common need. No individual authority, apart possibly from the financi-

ally strong corporations, can under modern conditions meet the cost of developing distant sources of any size. But apart from cost there is another consideration upon which we lay stress. Even if an authority were financially able to proceed alone to develop a new major source it would rarely, if ever, be reasonable—since suitable new sources are now so scarce—to allow a single authority to hold surplus supplies of water solely for their own benefit. *We are satisfied, therefore, that the only practicable way of ensuring adequate supplies to meet the increasing demand for water for domestic, industrial and agricultural purposes throughout the area is for local water authorities to combine for the joint development of suitable sources, and to share the new—and existing—supplies on a basis which public opinion will accept as equitable and in the interest of the common good.*

THE PROPOSED LOCH LOMOND SCHEME

48. In the latter part of 1960 the Secretary of State was already thinking of the need for a large-scale augmentation of the water supplies in Central Scotland, and in January 1961, after consultation with some of the local water authorities concerned, a Working Party consisting of representatives of local water authorities and the Central Department was set up to assess the future long-term needs in the area and to examine potential major sources of supply which could meet these needs and provide reserves to attract new water-using industries. Among possible projects the Working Party were asked in particular to examine a scheme, which had already been prepared in outline by the Department, for the development of Loch Lomond as a new source of supply. They also examined a scheme to develop the River Knaik/Glen Artney catchment area.

49. The Working Party, who recently reported to the Secretary of State, favour the Loch Lomond scheme and are satisfied that it could provide all the water required in the area in the foreseeable future. Consulting engineers who have examined the scheme in detail regard it as "a sound and economical solution to the problem of supplying an adequate quantity of water to meet present additional industrial and domestic needs in Central Scotland and to provide an adequate reserve against future demands." The scheme would involve the partial development of the catchment area by controlling some of the storage capacity available in the Loch within the present range of the water level. Under natural conditions the water level of the Loch rises and falls over a range of about 8 feet and it would be possible by controlling this fluctuation to provide sufficient storage in the Loch to ensure a safe yield of about 200 m.g.d. Out of this a flow of about 100 m.g.d. would be passed down the River Leven to maintain suitable conditions there, leaving 100 m.g.d. available for supply. For topographical reasons, this supply would have to be conveyed by pumping to a central point for distribution throughout the area in accordance with the needs of individual local water authorities. The first phase of the scheme would provide for a yield of 50 m.g.d.: this would be duplicated at a later stage to provide 50 m.g.d. more.

50. *We welcome the proposal to embark on a scheme of this magnitude which we consider to be conceived on the bold and imaginative lines necessary to match the challenge of the rising demand for water in the central area.* If the scheme matures, it will raise important questions of finance and administration. The aim must obviously be to align the maximum possible support for the scheme among local water

authorities in order to broaden the back that must bear the heavy expenditure involved. As regards administration, the scheme will demand a degree of co-ordinated effort among local water authorities which would be much easier to achieve if the authorities were grouped on a wider administrative basis than at present. The multiplicity of authorities now exercising independent functions would be neither a convenient nor an efficient organisation for dealing with the administrative aspects of the Loch Lomond project. As the Stirlingshire and Falkirk Water Board put it in relation to only one part of the central area, certain steps are necessary to "avoid the absurd position of some nine authorities from Stirlingshire and East Dunbartonshire each taking water from the new Loch Lomond Board with the resultant waste of public money in laying separate pipes and with the legal, financial and administrative complications arising from separate agreements with each authority." On both counts—finance and administration—any scheme of this magnitude underlines the need for an effective combination of authorities on the administrative level to match whatever organisation may be set up to conduct the engineering operations: indeed, *we believe that such a scheme makes a major re-organisation of the administrative structure, which has for long been regarded as desirable, a matter now of compelling urgency.*

6. The Proposed Shape of Future Water Administration

51. In what we have so far written we have sought to outline the nature of the existing administrative control of the water service in Central Scotland, and to assess its defects and inadequacies. Briefly, there are too many local water authorities in the area and the majority, judged by modern standards, are too small and financially too weak to fill the rôle of an independent local water authority effectively. There is also in varying degree a lack of flexibility and co-ordination in administration which militates against efficiency in the service. We now turn, therefore, to consider what shape the administrative structure should take if existing defects are to be repaired and future needs are to be effectively served.

52. In the words of our remit, we are "to make recommendations as to how far it might be desirable to draw together local water authorities in the area, with a view to facilitating measures for securing an efficient and economic supply of water adequate for all purposes throughout the area." We interpreted this as clearly implying that there was no question of changing the administration of the water service in the area so radically that it would cease to be a public service resting on the responsibility of local authorities. We therefore did not pursue in detail the possibility, mooted in the course of our discussions, of setting up independent water boards on the pattern of the boards responsible for the gas and electricity industries, though as will be seen from paragraphs 124 and 125, we examined a not dissimilar proposal put to us in oral evidence. Clearly, however, our investigation showed that a radical overhaul of the existing administrative organisation was not only desirable but urgently necessary, and we set out to find a solution which would draw the local water authorities together in a more closely integrated structure, taking as our aims the achievement of maximum co-ordination and flexibility in the supply and

distribution of water throughout the area, maximum efficiency in management and administration, and the greatest possible simplicity in the shape of the organisation itself. This pointed to the setting up of some form of regional organisation which would satisfy all these objects.

53. Two different forms of regionalisation were suggested to us as possible solutions. The first was the setting up of one or more bulk supply boards which would supply water to the existing local water authorities who would remain responsible for distribution in their respective areas. The second was the setting up of one or more regional water boards with full responsibility for both supply and distribution in their area: that is, they would be source-to-tap boards like the Airdrie, Coatbridge and District Water Board, the Clydebank and District Water Trust, the Stirlingshire and Falkirk Water Board and the West Lothian Water Board, but would operate over wider areas.

BULK SUPPLY BOARDS

54. The two bulk supply boards of any size in the central area—the Daer and the Loch Turret Water Boards—are of comparatively recent formation with correspondingly short operational experience. There has, however, been considerable experience of the operation of bulk supply boards in England and Wales, and we note from a circular which the Minister of Housing and Local Government issued to local water authorities in July 1958 that on the whole he comes down against this type of organisation:

"The place of bulk supply boards in the industry is to enable major sources to be developed jointly by water undertakers . . . Some continuation of bulk supply arrangements may also be appropriate to meet particular local problems. The Minister is, however, of the opinion that a general system of bulk supply boards, with distribution in the hands of existing water undertakers, would be wasteful of manpower and resources and that, in order to meet the overriding requirements of an efficient and economical water organisation, unified control over supply and distribution is essential."

We endorse this view and consider that the general aim of rationalising the administrative structure of the service in Central Scotland is not to be served by setting up more bulk supply boards and leaving distribution in the hands of the existing multiplicity of local water authorities. As we see it, this would promote neither co-ordination nor flexibility in the system: indeed, to the extent that the number of authorities in the area would presumably be increased rather than reduced it would have the reverse effect: there would be an increased danger of supplies reserved for one authority because of their capital liability within the board, but not immediately required, being denied to another in urgent need: there would be an increased call on the time of members who would have to attend meetings of both the bulk supply board for their area and their own particular local water authority: and administrative and accounting work would be duplicated. But apart altogether from these organisational objections, there does not seem to be any need for more boards of this kind in the central area. As the Minister's circular says, the place of a bulk supply board is to enable major sources to be developed jointly by local water authorities: but sources large enough to meet the present needs

of the central area are limited in number: some local water authorities are now looking to Loch Lomond for their future bulk supplies: and for projects of this magnitude we suggest in paragraph 63 the setting up of a special development organisation, to be differently constituted, to be armed with different powers and to function on a different basis from the ordinary bulk supply board as it has hitherto been known. *For these reasons we cannot recommend any re-organisation of the water supply service in Central Scotland which would be based on a system of boards responsible only for the bulk supply of water to the existing local water authorities who would, in their turn, be responsible only for its distribution in detail within their areas.* Such a structure would rest on a divided and not a unified control of supply and distribution and would not provide that degree of rationalisation which the existing system requires.

SOURCE-TO-TAP REGIONAL WATER BOARDS

55. *After weighing the evidence submitted to us and considering all the relevant facts, we are satisfied that a system of source-to-tap regional water boards wholly responsible for the supply and distribution of water in their respective areas is the solution most likely to achieve to the full the objectives in our remit.* An organisation consisting of a small number of regional authorities of this kind to take the place of the 53 existing local water authorities in Central Scotland would draw the whole administrative structure together and facilitate the measures necessary for securing an efficient and economic supply of water throughout the area. In the first place, it would provide a fully integrated administrative system which would get rid of all the inflexibility and the difficulties of co-ordination inherent in the present structure resting on a multiplicity of separate local water authorities. It would enable the existing sources of supply serving each region to be pooled for the common good, and an efficient and economical system of distribution for all purposes based on the use of the combined supplies to be organised, with the elimination of the wasteful duplication and overlapping of services belonging to different authorities that is so common at present. It would obviate, too, any possibility of individual local water authorities developing new sources and holding the resulting supplies without regard to the needs of neighbouring authorities or others that might conveniently be served from the same source; and conversely it would facilitate that degree of co-operation between sizeable authorities, financially strong and well equipped, that is now necessary for the development of major sources like Loch Lomond and the watering of the central area as a whole. It would, in short, secure the unified control of all aspects of supply and distribution that is essential to enable an expanding service to function with efficiency and economy.

CONSTITUTION OF REGIONAL WATER BOARDS

56. The powers available under the Water (Scotland) Acts of 1946 and 1949 and the supplementary powers provided in the Local Government (Scotland) Act, 1947, are in our view sufficient to enable a system of regional water boards to be created which would be structurally sound and capable of carrying out the functions envisaged for them within the new administrative framework.

Membership

57. Each regional water board would be a corporate body and would consist of representatives appointed by the constituent local authorities in the region from among their elected members. The size of a board would depend primarily on local circumstances: since these vary so much throughout the central area, with Lanarkshire on the one hand having a small number of large authorities and Fife on the other with a large number of small authorities, and with all the counties having existing joint water boards of different sizes and importance, it is not practicable to suggest a pattern that would be generally appropriate. *We therefore recommend that the size of each board should in the first place be considered by the interested constituent authorities themselves, and that the Secretary of State should be prepared to accept the membership which they agree upon, provided that he is satisfied that the representation which it would secure would be fair and equitable and that the board would not be larger than is reasonably necessary.* In the interests of the efficient conduct of public business, boards of unwieldy size must be avoided. For this reason, where the number of constituent authorities is large it might be desirable to group them and provide that authorities in a particular group would collectively elect representatives to the board.

58. Normally, representation on a regional water board should be accorded to constituent authorities on the basis of the population or the rateable value of their respective areas, or of the mean of these two factors. The general view expressed to us on this point was that local authorities were well-accustomed to consult each other with regard to their representation on joint boards and committees of various kinds and that no insuperable difficulties were likely to arise in determining the constitution of regional water boards. What seems important is that the approach of the constituent authorities as a whole should be flexible enough to take adequate account of the circumstances of the region and to cope equitably with any special representation claim that a particular authority may consider that they are justified in making. For the rest, the solution must depend on negotiation between the constituent authorities in the first place and on the decision of the Secretary of State where agreement cannot be reached.

Transfer of assets and liabilities

59. *The assets and liabilities of the various water undertakings in a region would be transferred to the regional water board.* Among other things this would mean that the board would take over the sources of supply, trunk mains and distribution systems serving the region and would assume responsibility for discharging the obligations resting upon the constituent authorities under agreements entered into with other authorities and with other bodies and persons. Any difficulty that might arise in identifying the particular loans raised for water supply purposes liable to be taken over by the regional water board from a constituent authority, because of the loans being embedded in a consolidated loans fund, could be overcome by the board assuming responsibility for a sum equal to the authority's outstanding water loan debt, subject to agreement on the appropriate rates of interest which applied to the debt.

Powers to borrow and hold land

60. The order setting up a regional water board should confer on the board, as a corporate body, all the usual attendant powers, including power to acquire

and dispose of land and the power to borrow available to joint boards under the Local Government (Scotland) Act, 1947. If the regional water board chose to borrow from its constituent authorities it would be necessary to secure that this did not give the lending authorities any right to have supplies of water from the board's resources reserved for their own use, since this would only perpetuate the existing difficulties arising from this cause in the operation of bulk supply boards. Regional water boards should be empowered to borrow temporarily pending the receipt of revenues. They should also have a power to establish a reserve fund to provide working capital and enhance the financial resources of the undertaking, subject to some limitation on the amount and use of the fund.

Financial responsibility

61. On the question of the financial responsibility of local authorities as constituent members of a regional water board, we note that sections 10 and 12 of the Water (Scotland) Act, 1949, provide machinery for a joint water board recovering their expenditure from their constituent members, one-fourth of such expenditure being apportioned on the basis of the rateable value or standard rateable value of all subjects within the board's area and the remaining three-fourths being allocated on the appropriate rateable value of all subjects receiving a piped water supply in the area from the local water authority: the individual local authorities then rate as provided for in the Act to produce the amount of the requisition. We see no reason to recommend any change in these statutory provisions.

Staff

62. Each regional water board should have its own technical and administrative staff. As the White Paper of 1944 observed, it is one of the weaknesses of the present system that in some cases the operation and supervision of small undertakings have, because of limited resources, been left in inexperienced hands. Apart from this, the supervision of water undertakings is only too often a part-time job undertaken by technical officers heavily burdened with other duties: the number of authorities in the central area who have an engineer or superintendent employed solely on water supply is only nine out of the total of 61. We are satisfied that the regional water undertakings into which we later suggest that the service in Central Scotland should now be divided would each be of sufficient size to justify its technical supervision and control being placed in the hands of a full-time qualified engineer and staff, who should have at their disposal such expert advice and assistance as they may require.

PROPOSED WATER DEVELOPMENT BOARD

63. Just as we think it essential to secure unified control of supply and distribution within each region through the medium of the regional water boards, so we consider that the new structure should provide fully for co-ordination and co-operation on an inter-regional basis in the development of new distant sources. *For this purpose we recommend the appointment of a strong central development agency—a Water Development Board—whose first major task would be to take over responsibility for the development of the proposed Loch Lomond project.* It would be the

Board's function to develop this and any other new major source that may have to be developed at a later date for supplying the central area, and to deliver supplies in bulk to each of the regional water authorities as they may require. We think it important, however, that the Board should not merely be a large-scale version of the typical bulk supply board already operating in different parts of the country to serve fairly limited areas. We visualise it as a flexible organisation which would not necessarily be limited to supplying the Central Scotland area as we have defined it but which might, if occasion arose, provide supplies on a similar basis to other local water authorities or future regional water boards on the periphery. *In the meantime we recommend that membership of the Board should be confined to those regional water authorities in Central Scotland participating in the proposed Loch Lomond scheme, each of which would appoint representatives from their elected members.*

64. The Board should be a body corporate with a common seal and should have power to hold land and to borrow, with the same attendant powers as are suggested for regional water boards. *We attach special importance to the need for borrowing powers so that the Board may be able to operate without being hampered by conditions requiring it to reserve supplies of water for the sole use of particular regional water boards* in return for contributions towards its capital and running costs. In other words, if the inflexibility that at present mars the arrangements between some existing bulk supply boards and local water authorities in this respect is to be eliminated and not merely to be reproduced on a higher level in the structure, the Water Development Board must be able to sell its water to the regional water boards on the basis of a uniform charge applicable to the whole area and this could best be done if the Board could find its capital in the ordinary way of raising loans.

65. At the heart of this problem, however, is the need to find a method of financing the Water Development Board during the early years of its operation when only a fraction of the water available to it will be required for supply purposes and when, therefore, the Board's income will not be sufficient to meet the loan charges on its capital expenditure except on terms that would be unduly onerous. To meet this difficulty some means will have to be found, if necessary by new legislation, on the lines of the suspension provisions in the Local Government (Scotland) Acts, 1947 and 1962 adapted as may be required. There are precedents which may serve as a useful guide here. For example, the Forth Road Bridge Joint Board is empowered to borrow from the Secretary of State the sums required to defray the capital expenditure so far as not otherwise met. These monies are to be repaid within a period of 30 years from the opening of the Bridge, provided that if at the expiry of that period any portion of the loan monies is still outstanding the Board may reborrow that sum from the Secretary of State for a further period not exceeding 30 years. The money borrowed is interest-free until the opening of the Bridge. An alternative arrangement might be one similar to that contained in the Edinburgh and District Water Works Act, 1895, under which the duty to set aside money for the repayment of the loans on Talla Reservoir took effect after an initial period of 10 years.

66. For the rest, the Water Development Board would require an adequate complement of qualified water engineers and other technical experts, and an experienced administrative and financial staff.

CENTRAL CO-ORDINATION OF WATER SERVICE

67. Some bodies, including the Convention of Royal Burghs and the Federation of British Industries, represented to us that there was a need for a central authority in the administrative structure of the water service. The Convention said that such an authority was needed to co-ordinate the activities of the regional water boards for the avoidance of duplication and overlapping of effort, and to resolve disputes between a board and an authority requiring a water supply. We have considered this suggestion but do not favour the appointment of such an authority since we think that this itself would involve duplication in the structure. A central water authority already exists in the person of the Secretary of State who has been armed with powers under the Water (Scotland) Acts designed to enable him to exercise a general control over the service. *We are strongly of opinion that central control should continue to rest in the hands of the Secretary of State who is well placed to co-ordinate the activities of the regional water boards and, where necessary, as an independent authority above the battle, to settle any disputes. We see no need to interpose an additional executive authority between the Secretary of State and the boards.*

68. But we fully agree with the Convention in emphasising the basic need for inter-regional co-ordination and in view of the statutory duty resting on the Secretary of State to promote the conservation of the water resources of Scotland we are particularly concerned to stress the importance of his rôle in the over-all co-ordination of the development of new sources. If the competition for sources and the wasteful duplication of services that have been only too common in the past are to be avoided the relationships between individual regional water boards and between them and the Water Development Board must be closely interlocked. Here, briefly, the key is multi-lateral consultation. *To this end we recommend that while each regional water board should be responsible for the development of any local source intended to serve only the region or parts of it, they should be required in the first place to consult neighbouring boards for any interest they may have, and also the Water Development Board about the possibility of serving the area from a common source.* Conversely, the Water Development Board, before embarking on proposals for the development of any source intended to serve two or more regions, must obviously fully ascertain the views of the regional water boards concerned. Thereafter, the proposals of individual boards for the development of a local source and of the Water Development Board for the development of a common source should be subject to the approval of the Secretary of State who must be left as the final arbiter in the case of dispute or on the extent to which new developments are to be allowed to proceed.

69. Apart from this, we should hope that regional water boards would form an association among themselves for the mutual exchange of information, the discussion of questions of policy and common interest and other related purposes.

6. Evidence of Local Water Authorities and Other Bodies

70. We received written evidence on the subject of our remit from 22 local authorities and joint water boards and from 10 professional, representative and other bodies interested in the water service. Of these, 17 local authorities and joint boards and 3 other bodies sent deputations to us to supplement written statements by oral evidence.

71. Most of the local water authorities included in their written statements historical details about the origin and development of their undertakings which served as a useful backcloth to our investigation. In addition, some outlined the efforts which had already been made in their districts, with or without success, to secure a degree of joint action on a voluntary basis and this, too, we found to be useful background material. But what most directly concerned us were the views expressed by the authorities and interested bodies alike as to how the structure could best be re-shaped to fit it to serve the needs of the future with efficiency and economy. These views influenced the formulation of our recommendations in two major respects: they assisted us to our conclusion that a system of regional water boards should be created to secure unified control over the supply and distribution of water in Central Scotland, and they focussed certain problems affecting the delimitation of the regional areas.

72. On the first point, the weight of opinion was decisively in favour of setting up a system of source-to-tap regional water boards in preference to one based on bulk supply boards leaving distribution in the hands of the existing authorities. As we have mentioned earlier, this all-purpose type of organisation is already in operation in Glasgow, Edinburgh, Midlothian, West Lothian, and in the supply areas of the Stirlingshire and Falkirk Water Board, the Airdrie, Coatbridge and District Water Board and the Clydebank and District Water Trust. Other large local water authorities who said that they were in favour of adopting it were Dunbarton County Council, Fife County Council, Lanark County Council and Stirling County Council. The professional, representative and other bodies who gave us their views were (expressly or by implication) of the same mind—the British Waterworks Association (Scottish Committee), the Convention of Royal Burghs, the Federation of British Industries (Scottish Council), the Institution of Water Engineers (Scottish Council), the Society of County Engineers in Scotland, and the Scottish Council (Development and Industry).

73. On the second point—the delimitation of the regional areas—opinion was divided and, as might be expected, the proposals put to us varied both in scope and detail. The most comprehensive proposal was that of the Institution of Water Engineers (Scottish Council) who favoured the creation of a single source-to-tap board for the supply and distribution of water right across the industrial belt from Ayrshire and Renfrewshire in the west to Fife and East Lothian in the east, including Glasgow and Edinburgh, with six sub-areas for purely administrative purposes. Not going so far as this, several local water authorities suggested the setting-up of a number of regional water boards with smaller areas based primarily on the existing local government boundaries but here and there involving a combination of counties or a sub-division of counties to secure regional boundaries resting, as one local water authority put it, "on technical considerations rather than administrative convention."

Opinions varied, however, as to what these divergencies should be and as to the particular regional water boards to which the areas affected should be assigned.

74. To show the wide support expressed in favour of the creation of a system of source-to-tap regional water boards in comparison with other proposals, and to identify the variations in the boundaries of regional areas suggested by different authorities, we quote the following extracts from the written evidence which we received on these particular topics, and where necessary we add supplementary views expressed in oral evidence.

LOCAL WATER AUTHORITIES AND ASSOCIATIONS OF LOCAL AUTHORITIES

County Groups

Dunbarton County Council

75. "The County Council suggests as a first step that there should be a joint Water Board for the whole of Dunbartonshire (including the detached portion) and that similar Boards should be set up for the Counties of Lanark, Stirling and West Lothian. Further it is suggested that, if it is determined that the Loch Lomond Scheme is to proceed, a regional Board should be set up as a Central Water Board with the function of providing a bulk supply of raw water to those parts of these four areas, and each of the County Boards would have representation on the Central Board. Each County Board would, from the point of delivery from the Central Board, be responsible for purification and distribution within its own area."

Clydebank and District Water Trust

76. "It would be desirable as the remit to the Committee suggests to 'draw together local water authorities in the area' but a clear delimitation of collective responsibility should be made out. Such delimitation should rest not only on administrative expediency but on natural or technical considerations of land and surface content . . ." In oral evidence the Trustees' representatives confirmed that they would support a proposal to set up a source-to-tap board for the County of Dunbarton, and emphasised the importance of maintaining local authority control of the water service through such boards.

Lanark County Council

77. "It is the considered opinion of Lanark County Council that the time is opportune for a combination of all the water authorities in Lanarkshire or, alternatively, that the powers of the Daer Water Board be extended to take over the existing resources of the constituent members of the Board and to be responsible for the distribution of all water within Lanarkshire. This would be a natural, logical and desirable step to take in this County . . ." In oral evidence the County Council's representatives said that the constituent members of the Daer Water Board had had discussions and were all satisfied that there should be a single source-to-tap authority for the County.

Stirlingshire and Falkirk Water Board

78. "The Board have in the past been strongly and consistently in favour of the creation of a Regional Water Authority for the whole geographical area of the County of Stirling and the detached portion of the County of Dunbarton . . . The need for a regional authority will be reinforced if the recent proposals for the Loch Lomond Scheme are given effect to. The Board cannot express too strongly their conviction that the benefits of this . . . scheme cannot be taken advantage of by the Board and its neighbouring authorities on a sound financial footing unless all the authorities are prepared to sink their separate identities into a larger authority able to assess the requirements of the area as one unit and make its demands on the Loch Lomond Scheme accordingly. . . . The Loch Lomond Scheme has also opened the way to the establishment of a much more comprehensive Board covering not merely the areas referred to but also the area of southern Perthshire and the whole of Clackmannanshire. Such a Regional Authority would, of course, require to incorporate the Loch Turret Water Board . . . It would be a full Regional Authority with a statutory duty to supply all consumers irrespective of their location. The Board would not be in favour of a Bulk Supply Board . . ."

Stirling County Council

79. ". . . This broad analysis . . . would suggest that the proper way to organise the supply of water in Central Scotland is to start by forming the three main areas of Lanarkshire, West Lothian and Stirlingshire each into a separate Regional supply area . . ." In oral evidence the Council's representatives said that they were convinced that the present system of distribution by a multiplicity of local water authorities was inefficient, and they agreed that there should be a single authority in each region responsible for both supply and distribution.

West Lothian Water Board

80. In oral evidence the representatives of this Board said that they were in favour of the proposal to set up a bulk supply board to administer the Loch Lomond scheme and were willing to co-operate with other authorities in such a scheme. They did not, however, consider it necessary for the West Lothian Water Board to be amalgamated with other authorities for distribution purposes.

Fife County Council

81. "The logical solution of the problem in Fife is for all the water authorities to amalgamate to form one water supply area which might also include Kinross-shire and parts of Perthshire and Clackmannan . . . Newport and Tayport burghs are at present supplied by Dundee and from a purely engineering point of view the arrangement might continue although Fife County Council are already in a position to supply them at relatively little capital cost, as the County mains are within reasonable distance and the County Council have adequate supplies to meet the requirements of both the part of the County supplied by Dundee Corporation and the landward area adjoining . . . It does not seem reasonable to bring Loch Lomond water right across the country to feed Fife and at the same time to take Loch Turret water to areas south of the Forth. It would appear much more logical to use Loch Lomond for Central

Scotland south of the Forth and Loch Turret for the area to the north of the Forth."

Large and Small Burghs

Dumbarton Town Council

82. "Despite their present independence the Town Council consider that, in principle, the regionalisation of the administration of the supply of water is desirable . . . The Town Council stress the need for adequate compensation to be made to the ratepayers . . . who have had to bear the cost of providing their own adequate resources."

Inverkeithing Town Council

83. "If a regional scheme is contemplated . . . arrangements should be recommended which would enable small burghs such as Inverkeithing who are their own undertakers to be compensated for the fact that their water supplies were drawn from sources which were constructed at a time when costs were much lower."

Kirkcaldy Town Council

84. In oral evidence representatives of the Town Council indicated that they would prefer to retain responsibility for the distribution of water in their own hands. The Council had not reached any decision in the matter but the representatives felt that if it were decided in the public interest to set up a regional water board to secure the unified control of both supply and distribution in the County, the Council would be likely to accept this structure.

Kirkintilloch Town Council

85. "The Town Council are of opinion that the bulk supply of water in Central Scotland should be regionalised and that distribution should be left to the existing water authorities."

Newport-on-Tay Town Council

86. Representatives of the Town Council, in oral evidence, said that the arrangements under which Dundee Corporation had supplied and distributed water in the Burgh had worked satisfactorily over a long period of years and the Council desired these arrangements to continue.

Stirling Town Council

87. The Town Council represented that they were "in a very difficult position regarding water supply to the Burgh in dry seasons." In oral evidence their representatives said that while for local reasons they would prefer to retain responsibility for the distribution of water in the town, the Council would agree to become a member of a source-to-tap board in the County should that be the form that re-organisation might take.

Cities

Corporation of Glasgow

88. "The Corporation have particularly considered the possible future regionalisation of water supplies within the Central Scotland belt and are of opinion, having regard to the extent and composition of their existing area of

supply, which of itself constitutes a form of regionalisation, that they should continue to remain an independent water authority responsible for the development and distribution of water supplies for the Glasgow water supply area."

Corporation of Edinburgh

89. The Corporation "agree in principle that there are probably grounds for considering grouping together of certain of the individual authorities in the mid-Scotland area, particularly in the case of the burgh authorities. So far as the Corporation and Midlothian are concerned, they are already operating successfully under a regional scheme, fairly recently introduced, satisfactory plans for the further development of which do not generally create any community of interest with authorities in the mid-Scotland area. They are well satisfied that for the present and indeed for the foreseeable future the Edinburgh and Midlothian undertaking is well established and that there would be no advantageous purpose in amalgamating with authorities in the mid-Scotland area. It is their view that, while at the moment there are no substantial grounds for a grouping arrangement for individual water authorities in the South-East Scotland area, i.e. from the Firth of Forth south to the English border, the community of interest of some of the authorities in that area in the matter of future development of new sources of supply in the River Tweed basin obviously calls for some form of co-ordination and the way should be left open for future developments along these lines."

Corporation of Dundee

90. "With the construction of the Tay Road Bridge it is reasonable to anticipate that there will be considerable development in North Fife in the area presently supplied by the Dundee undertaking. To meet this anticipated demand, together with the present commitments, the opportunity is being taken to lay a large diameter main (24" diameter as allowed for in the Parliamentary Bill) over the new road bridge. Further plans are in process of being formulated to overhaul the water supply arrangements in North Fife, together with provision for the new means of supply by the Tay Road Bridge. Whereas there are considerable difficulties in supplying the area from the Fife Water Authority, the geography is such that when an adequate main is available on the new Tay Road Bridge, a gravity feed from Dundee would be available for the whole of North Fife reaching as far as St Andrews, Guardbridge, Cupar and Leuchars, which was so supplied during the last war."

Associations of Local Authorities

Associations of County Councils in Scotland

91. "The Association has noted from the Memoranda of Evidence submissions by certain County Councils that there is a need to co-ordinate the efforts of local water authorities in parts of Central Scotland and would agree that this is so."

Convention of Royal Burghs

92. "Local water authorities who obtain their supplies from the same or adjacent sources should consider schemes of amalgamation, the new supply area being related more to geographical and physical boundaries than local

authority administrative boundaries, the criterion being that the requirements, present and future, of the whole area can be met from the resources within that area, and thereby the minimum network may be used, wastage reduced or eliminated, and greater efficiency achieved. . . . Accordingly responsibility for the water supply in that area should be in the hands of a properly constituted body, e.g., a Regional Board, with its own technical and administrative staff, comprised of representatives appointed by the local authorities in the area (if need be under a scheme of staggered representation should individual representation result in a very large Board), determined, e.g., according to rateable value of the authority or other agreed method. . . . The Board thus created should be responsible for all water supply matters in the area, including local distribution, except in cases where it is considered expedient that the local authority should be responsible for local distribution: the Board should have power to supervise distribution to ensure maximum use of the resources and avoidance of waste."

PROFESSIONAL AND OTHER INTERESTED BODIES

British Waterworks Association (Scottish Committee)

93. "The Scottish Committee accepts the principle of regionalisation under full local authority control and subject to satisfactory safeguards. It is the view of the Scottish Committee, however, that regionalisation of water supplies should be applied only where necessary in order to provide for the more satisfactory use of resources . . . Wherever possible combinations of local authorities should be carried out by voluntary agreement between the local water authorities. . . . The Scottish Committee takes the view that it is essential that a local water authority should be able to control both the quantity and the quality of the water it supplies if it is to fulfil its statutory obligations and that therefore generally where the combination of water authorities is necessary the combined authorities should be all-purpose authorities." In oral evidence representatives of the Scottish Committee said: "The Scottish Committee hold that the all-purpose board is the one to be preferred . . . if the resources are largely to be found inside the area of distribution of the board . . . But when the sources of any particular area are not to be met from its own area . . . you may have to go and develop very large sources a long way away. There is the kind of case in which you could envisage a bulk supply board."

Federation of British Industries (Scottish Council)

94. "In all these circumstances we feel that the present structure of water undertakings should be reviewed and modernised. This policy we believe should tend towards rationalisation and improvement of the existing structure rather than towards the creation of major new executive machinery as is currently proposed for England and Wales following the Proudman Committee Report and the Government White Paper on the subject since there would appear to be little evidence that the nature and extent of the problems involved in Scotland would justify this. Therefore we believe that a reduction in the number of authorities should be aimed at, and it is suggested that this could be achieved by the use of the Secretary of State's existing powers to require the merging of authorities into groups. Careful forethought would require to be given to the size and location of these groups, but their basic objective would be to improve economy and efficiency in administration and to ensure the most

effective use of capital resources and of water resources within a national policy prescribed for them. Subject to these considerations, industry believes that there should be as few groups as possible, that they should have a pronounced regional rather than local interest, and that each should consist of not more than 15 persons."

Institution of Water Engineers (Scottish Council)

95. "We are of opinion that there are many obvious administrative advantages to be derived from a system of unified control, perhaps the most important being that it makes possible rational planning of the development and the best use of existing resources . . . Having regard to the location of the available resources and the need to develop these to the best advantage, the Scottish Council consider that for rational planning of adequate water supplies for all the industrial belt the area might . . . extend from Fife in the east to Ayrshire in the west, including Edinburgh, the Lothians, parts of Perthshire, Clackmannan, Fife, Stirlingshire, Lanarkshire, Dunbartonshire, Glasgow, Renfrewshire and Ayrshire. . . . The Council are of opinion that to enable rational planning of supplies to take place there must be a single authority responsible for the administrative control of the whole area from source to tap. This would have the desired effect of establishing a uniform system of charging for water supplies throughout the area . . . The area . . . would be split up into six separate sub-areas, for ease in administration, roughly as follows:—(1) Fife, parts of Perthshire, Kinross, Clackmannan and Stirlingshire (North of the Forth); (2) Edinburgh and the Lothians; (3) North Lanarkshire, East Dunbartonshire and Stirlingshire; (4) Lanarkshire (Daer area); (5) Glasgow and Dunbarton; (6) Renfrewshire and Ayrshire. The exact delineation of these sub-areas would not take account of existing local authority boundaries but only of topographical considerations and considerations of a size of unit most suitable for efficient routine administration . . . There should be a central body or board with full administrative authority for the region, possibly appointed by the Secretary of State but broadly representative of local government in the region. We do not envisage any sub-area boards or committees which we regard as unnecessary, and which if established could only result in the kind of friction which we seek to eliminate. The Board would appoint all staff including the chief engineer . . . We would expect that the chief engineer and his staff would be responsible for all capital work delegating responsibility to district engineers at his discretion. We would expect the district engineer to have complete executive authority within the respective sub-areas . . . On the debit side, we would anticipate in a few cases the necessity for the establishment of district offices, for the convenience of the public, but we believe that in most cases, at present, separate offices and staffs exist which represent a charge on existing undertakings. The new authority would take over all assets and debts of existing local water authorities. It would be responsible for the financial control of the whole region and would fix a standard charge for water which would apply throughout the region."

Society of County Engineers in Scotland

96. "The Society accepts the principle of regionalisation as being the best means of providing a fuller development of water supplies within the country. The regional areas . . . should not be too great in area, since this would prove unwieldy in organisation and operation. The control of regional water schemes

would be in the hands of members drawn from the local authorities within the areas served and their responsibilities should cover all those at present vested in local authorities. The demand for water, in the future, will increase with the facilities demanded by a modern community. In order to develop new sources of supply a Bulk Board will be necessary so that the source can be developed economically and representation on the Bulk Board should be from the Regional Boards with equal representation irrespective of valuation and demand."

The Scottish Council (Development and Industry)

97. "To benefit substantially from any actions associated with water survey and control on the scale required, we would expect the establishment of regional water supply boards of economic size. . . ."

98. The foregoing summary of evidence*, when screened, spotlights the questions affecting the delimitation of regional water areas in Central Scotland about which differences have emerged during our investigation. Should there be only one source-to-tap regional board for the whole industrial belt as suggested by the Institution of Water Engineers? Should the West Lothian Water Board become part of another board serving a wider area or should it remain a separate source-to-tap board within its present limits of supply? Should the Burghs of Newport-on-Tay and Tayport and the neighbouring landward area in north-east Fife remain within the limits of supply of the Corporation of Dundee, and should the Corporation extend their area of supply deeper into the County, or should the whole of Fife be within the same regional area? Should the eastern (or detached) portion of Dunbartonshire be included in the same regional area as the rest of the County, as the County Council desire, or should it be combined with the area lying to the east in Stirlingshire from which it at present derives all its supplies? Lastly, what is to be the future of the Loch Turret water undertaking, to what areas should its resources be made available, and what should be the rôle of its constituent members—Grangemouth Town Council, Clackmannan County Council and Perth County Council—in relation to the regionalisation of the water service in Central Scotland? These three authorities—the Loch Turret group—alone of all the authorities not already in a source-to-tap combination who submitted evidence to us, represented specifically that they did not want to participate in a wider organisation of this kind and that they wished to continue to develop their own resources to serve their separate water needs. In view of the importance of the Loch Turret resources in relation to the needs of Central Scotland as a whole, and because of other implications of a general nature which are involved, we think it necessary to deal with the evidence of these authorities in detail before proceeding to consider the other problems referred to in this paragraph.

7. The Loch Turret Group of Local Water Authorities

EVIDENCE SUBMITTED BY THE GROUP

99. The Loch Turret water undertaking, promoted jointly by the Town Council of Grangemouth, the County Council of Clackmannan and the County Council of Perth, was brought into being by the Loch Turret Water

* The summary does not include any reference to local water authorities or other bodies who submitted evidence but did not express any views about setting up regional water boards.

Board Order, 1958. We were told that it is to be developed in two stages: the first, which includes the construction of a reservoir and treatment works, is expected to be completed in the course of 1963, and is planned to yield a total supply of 11.5 m.g.d.; the second stage, which is expected to be proceeded with in 1965, will increase this yield to some 18 m.g.d. In the meantime, the main pipeline has been laid from Loch Turret to a point near Bridge of Allan, where connections have been made to Grangemouth Town Council's pipeline running to the south and east through east Stirlingshire and to Clackmannan County Council's pipeline running eastwards. Perth County Council are at present engaged in laying east and west-going mains to supply south Perthshire from the Turret main. All three authorities stressed the harmonious relations which exist between them in what they regard as an efficient undertaking capable of meeting their needs for all purposes in the foreseeable future. They all said that they would regard with concern any proposals which would disturb this happy association.

Grangemouth Town Council

100. The representatives of the Town Council who appeared before us did not question the wisdom of creating a system of regional water boards across the industrial belt as other local water authorities and interested bodies had proposed: they sought only to persuade us that the circumstances of Grangemouth were so special that their Council should be left alone to develop their own resources outside any such system. Knowing as they did that the great weight of responsible opinion was solidly in favour of the opposite view—the fullest possible co-ordination of water administration and the pooling of resources—it could not have been easy for them as representing a small, albeit an important, industrial burgh to stand virtually alone, and we wish to express our appreciation of the skill and statesmanship with which they presented their case.

101. The Grangemouth water undertaking has grown rapidly in recent years. The population of the town is just under 19,000. Until the war its total water resources amounted to 2 m.g.d. supplied from the North Third reservoir, a source which the Town Council share with the Town Council of Stirling. In the early post-war period, however, to meet the demands of the expanding oil and chemical industries in the town this supply was augmented by 8 m.g.d. obtained from the Stirlingshire and Falkirk Water Board. More recently, the Council have received an addition of 2.5 m.g.d. under the first phase of the Loch Turret scheme. The Council's total resources at the present time amount, therefore, to 12.5 m.g.d.; this, they expect, will be raised to 16 m.g.d. in the course of 1963; and by 1965 when the second phase of the Loch Turret scheme is expected to be in operation, their resources will be increased further to 20 m.g.d. But the Council's plans do not end there. They have made provision in the size of their pipeline from Loch Turret to carry 8 m.g.d. more from another source in south Perthshire which would bring their total resources to 28 m.g.d. The Council claim that the consumption of water in the town exceeds that in any other burgh of comparable size; that their undertaking is unique in that at present about 80 per cent of the available supplies—a proportion likely to increase to 90 per cent—are given off to industries of major importance to the Scottish economy; that Grangemouth is becoming one of the largest water supplying authorities in Scotland; and that they have a good record of efficiency in meeting the needs of their area. Because of all this, they claim that there can-

not be any real case for merging their undertaking in a wider regional organisation.

102. But it is not only because of the size and efficiency of their undertaking that the Council think that they should be allowed to remain as an independent local water authority. They say that if they were merged in a regional water board they would lose that local initiative which has already assisted the industrial development not only of the town but of Central Scotland and could stimulate it still further. They elaborated this in their written evidence: "... this initiative and foresight would be lost and the development of the Grangemouth area would suffer in that the needs of the large rural area adjoining might be given preference in view of the fact that the representation on the regional water board would be likely to be biased in favour of the adjoining burghal and rural areas." Their representatives told us how by their efforts the Council had attracted industry to the town which otherwise might have been lost to Scotland, how they had been able to point to the availability locally of good and adequate labour supplies, to easy building sites, to a favourable geographical position, but most of all to low rating and cheap water. If the Council ceased to be an independent water authority "it would mean that we would have to go to this regional board and ask them what the price of the water is . . . the price of the water at which we could attract people and that, after all, is the major point. . . ." This would be an economic handicap to Grangemouth; for the rest, membership of a regional water board would, in the Council's opinion, only result in an increase in the present rates with no advantage and possible grave disadvantage to consumers in the town.

Clackmannan County Council

103. Compared with Grangemouth, the consumption of water in the landward part of the County of Clackmannan is small but here too the trend is an increasing one. In the last 15 years consumption has increased from 0.5 m.g.d. to 0.9 m.g.d. and the County Council estimate that their needs for all purposes will have increased to 3.3 m.g.d. in 1971, 3.6 m.g.d. in 1981, and to 3.8 m.g.d. in 1991. As a constituent member of the Loch Turret Water Board the Council are entitled to receive up to 2.4 m.g.d. under the first stage of the development of the undertaking, to be increased to 4 m.g.d. under the second stage. In making their estimates the Council have taken into account the possibility of augmenting the individual supplies of the small burghs in the County but the demands of expanding industry in the landward area are likely to eat into the reserves provided for this purpose.

104. The attitude of the County Council on the subject of the combination of local water authorities can be briefly stated. In oral evidence their representatives said that they favoured combinations so long as they were efficient and under local control. The Council, as a member of the Loch Turret Water Board, were already committed to the organisation of the water service on a wider area than their own County but they would not favour an area that involved remote control. Nor did they favour a source-to-tap organisation which, they felt, would involve an unacceptable degree of interference by a regional water board in the planning and execution of purely local developments. What they wanted was a system of bulk supply boards like the Loch Turret Water Board, leaving the detailed distribution of water in the hands of the existing local water authorities.

Perth County Council

105. As a constituent member of the Loch Turret Water Board, the County Council are entitled to take up to 2.4 m.g.d. under the first phase of the scheme and the intention is that they would be entitled to 1.6 m.g.d. more under the second phase, making a total ultimate entitlement of 4 m.g.d. This supply is intended to serve an area in the west-central and south-west part of the County. The Council's representatives who saw us did not think that 4 m.g.d. would be an over-provision for the long-term needs of this area, which represents about one-third of the total area of the County, but allowing for the slower rate of development in a rural area there was little doubt that in the first few years there would be a substantial surplus available out of the 2.4 m.g.d. to which the Council are entitled under the first phase.

106. The crux of the County Council's evidence concerned their objection to this part of the County being included in a regional water area. In their written evidence the Council said they had "never regarded the landward area of the County of Perth as falling geographically within 'Central Scotland' mentioned in the terms of the Secretary of State's remit to the Advisory Committee. The Council wishes to represent most strongly that no part of the landward area of the County of Perth can be considered as being within 'Central Scotland' and that therefore no part of the landward area of the County of Perth comes within the terms of remit to the Advisory Committee." In oral evidence their leading spokesman elaborated this in these words: "We feel that our interests, our problems, our difficulties, the manner in which these problems may resolve themselves are quite different in many ways from other areas in Scotland and we feel that these interests are so different that we are in effect no part of Central Scotland—neither are we part of Central Scotland geographically."

107. The County Council's representatives—speaking as such and not as spokesmen of a constituent member of the Loch Turret Water Board—said that provided the Council were safeguarded in the supplies of water to which they were at present entitled from the Board and on equivalent financial terms, the Council could not reasonably object if it were decided that the rest of the Turret water would be better administered under another system. In these circumstances they would become a customer of the new regional water board. They would look to the Board to supply them with 2.4 m.g.d. out of the first phase on terms as near as may be to those which they had already negotiated with the Loch Turret Water Board. Their expenditure on this phase would be readily identifiable as it was a set fraction of the loan charges incurred together with a proportion of the running costs. In due course they would expect to be offered 1.6 m.g.d. out of the second phase supplies. No formula had however been agreed among the constituent members of the Loch Turret Water Board for sharing the costs of this phase. Accordingly, if the County Council took up the additional 1.6 m.g.d. this would be paid for on terms to be negotiated between them and the new regional water board.

FUTURE OF THE GROUP

108. Having considered all the evidence submitted to us by the Loch Turret group of water authorities and by neighbouring authorities we recommend (a) that *Grangemouth Town Council and the County Council of Clackmannan (with the town*

councils of the burghs in that county) should become constituent members of the regional water board which we later suggest should be created for Stirling and Clackmannan Counties; (b) that the assets and liabilities of the Loch Turret Water Board, including outstanding loans, should be transferred to this new regional water board who would become responsible for the future administration of the Loch Turret water undertaking; (c) that the area of the County of Perth to be supplied from the Loch Turret source should not be included in the area of the new regional board but that the County Council should be safeguarded by the new board both as regards the supplies for this area which they are at present entitled to receive and as regards the terms which they have already negotiated with the Loch Turret Water Board.

109. The recommendation with regard to the exclusion of the area in south Perthshire from the scope of our regionalisation proposals is based on a full acceptance of the County Council's case as summarised in paragraphs 105 to 107 which we consider to be well founded. We think that the fairest arrangement from the point of view of the County Council and the regional water board would be for the Council to be guaranteed a future supply of 4 m.g.d. from the completed Loch Turret scheme, or other source available to the regional board, on such terms as might be agreed between the Council and the board (or, in default of agreement, as might be determined by arbitration); the terms for the 2.4 m.g.d. which the County Council are to get from the first phase of the scheme should not be less advantageous to the Council than those incorporated in the Loch Turret Water Board Order, 1958. The Council have contributed to the cost of the Loch Turret Water Board in respect of both loan charges and running costs in proportions set out in that Order, although by the end of 1962 no water supplies had in fact been taken by the Council. The Order applies only to the 2.4 m.g.d. to be taken under the first phase of the scheme and if the Loch Turret Water Board were to continue in existence a new agreement would have to be drawn up in respect of the 1.6 m.g.d. covered by the second phase. It seems reasonable, therefore, that if the Council are given this guarantee they should continue to pay their share of the costs from the outset, regardless of the quantity of water they draw from the undertaking. We were told that these first phase costs include the cost of the Loch Turret reservoir, which does not require to be enlarged for the second phase extension. The County Council recognise that if they wish to take up the additional 1.6 m.g.d. they would require to negotiate a new agreement with the regional board. On the other hand, if the County Council were to relinquish their rights to the additional 1.6 m.g.d. from the second phase, they would continue to pay for the 2.4 m.g.d. according to the terms already agreed for the first phase of the scheme.

110. Crief Town Council are not a constituent member of the Loch Turret Water Board but are entitled under the Order to receive up to 0.75 m.g.d. from the Board. This is the Town Council's only source of supply and we recommend that they should continue to receive this guaranteed supply from the new regional board, referred to in paragraph 108, which would become responsible for the future administration of the Loch Turret water undertaking.

111. While we recommend the exclusion from the scope of the regional proposals of the area in south Perthshire which is to be supplied from the Loch Turret source, we are aware that problems exist in connection with the watering of the Burghs of Abernethy and Auchterarder and we would expect that the provision of adequate supplies to these areas would be considered by the appropriate authorities when the regional board structure is in operation.

112. The remaining recommendations in our view flow inevitably from all that has already been said throughout this report about the need in the public interest for unifying the control of the supply and distribution of water in Central Scotland and for the pooling of existing and the sharing of new resources for the common good. If all we have said on this issue is valid—as to which we ourselves are in no doubt—the inclusion of Grangemouth Town Council and the Clackmannan authorities in a regional water board with their closest neighbours is a logical step and necessary for the full co-ordination of the water service in this area. The map at Appendix IV shows how the Grangemouth section of the Turret main traverses east Stirlingshire without giving off general supplies in that area and runs athwart a network of other systems. Any scheme to co-ordinate the water service here which ignored these facts and left the Grangemouth undertaking to function as a separate entity would be quite unrealistic. On the other hand, the creation of a single pool in the area would import a greater degree of flexibility into the structure—Turret water being led into areas where it could be most effectively used and reimbursed to Grangemouth from another source. We agree with the Grangemouth representatives that in such circumstances the water given to Grangemouth in reimbursement must be of suitable quality, though we are bound to say that we have had no criticism of the quality of the 8 m.g.d. at present being delivered to the town from Stirlingshire sources.

113. We should put it on record that we considered a suggestion that the Loch Turret water undertaking might be handed over to the Water Development Board which, we are suggesting, should be appointed to develop the proposed Loch Lomond scheme or any other source of common interest to the authorities in the area. From a purely engineering point of view there seemed much to commend this proposal in respect that in the hands of the Water Development Board the supplies from Loch Turret could be used flexibly to meet not merely regional but inter-regional needs. What was in mind particularly was that, in the long term, water might be diverted from Loch Turret into Fife and equivalent supplies made good to Stirlingshire from Loch Lomond or other sources. This is a possibility which we suggest might be noted for consideration when at length the rising demand for water in Fife calls for inter-regional attention. But in the meantime the Loch Turret water should be allowed to flow into those areas in Stirlingshire and Clackmannan where the immediate need exists. Apart from these technical considerations we should not think it fitting to recommend that the Loch Turret water undertaking should be unnecessarily separated from the authorities who created it: it would be right that it should pass to the regional water board of which Grangemouth Town Council and Clackmannan County Council are, we suggest, to be constituent members.

114. We turn now to the specific objections of these two authorities against being included in a source-to-tap regional water board. With regard to Clackmannan County Council's predilection for bulk supply boards we have nothing to add to what we say in paragraph 54 about the unsuitability of this type of organisation: and we are not aware of any evidence that membership of a source-to-tap board would have the frustrating influence on local developments that the County Council appear to apprehend.

115. We have no desire to minimise the objections voiced by Grangemouth Town Council but we are unable to accept them as justifying the exclusion of the Council from the scope of the proposed regional arrangements. We should

be less than frank if we did not say that we were more impressed by the Council's account of what they had achieved in attracting industry to the town by their initiative in the past than by their claim that they would lose their initiative if they became a member of a regional water board. Water supply is only one of the factors that count in the attraction of industry to a locality: it may be a factor of great or less importance with the widely varying needs of different industries: but whatever may be the case we do not see why as an ordinary local authority charged with the responsibility of advancing the welfare of their area any council should not continue to exercise their initiative to the full to attract industry after they have become a constituent member of a regional water board. Nor are we influenced by Grangemouth Town Council's fear that there would be discrimination against them in such a board. It would be naïve to believe that during the period of Grangemouth's emergence to greater industrial importance her interests and those of neighbouring areas have not on occasions been in conflict: but these are matters outside the ambit of our investigation and we would not be justified in expressing opinions about them or in letting them influence our recommendations.

116. Arising out of these objections, however, the question of Grangemouth Town Council's representation on the regional water board was referred to and on this we feel called upon to make a special comment. Having in view the relatively high consumption of water in the town and its high rateable value any representation based on population alone would in our view fail to do justice to the Town Council. We have no reason to think that the other constituent members of the board would not themselves recognise this and be prepared to concede a degree of representation to the Council which would adequately take account not only of the population of the Burgh but of its high rateable value, but we mention the matter here so that if it should ever come before the Secretary of State for consideration he may be aware of our view.

117. As to the effect that regionalisation might have on the price of water to industrialists and other consumers in Grangemouth, it should not be too readily assumed that the charges must inevitably be higher than they would be if the Council were to continue to function as an independent local water authority. A subsidiary purpose of regionalisation is the levelling out of water charges and rates in the local government areas which comprise the region. This means that, in some areas, the rates will be more than otherwise they would have been, and in others less. We recognise that this is a matter of particular concern to the Town Council of Grangemouth, but it is so to no greater degree than to other authorities in Central Scotland who have procured water on terms now considered favourable, whether as a result of wise expenditure in the pre-war years or of advantageous bulk supply agreements.

118. Grangemouth's is a special case, however, because of its rapid post-war industrialisation. As we have seen, the Town Council entered into an agreement for a supply of 8 m.g.d. from the Stirlingshire and Falkirk Water Board, promoted the Loch Turret scheme along with Clackmannan and Perth County Councils, and made agreements with industrialists in the Burgh to pay a proportion of the loan charges on specified capital works. The development of industry in the Burgh has caused the rateable valuation to rise enormously, so that now Grangemouth has the highest rateable valuation per head of population in Scotland; for 1962-63 it is put at £54 per head. It is on this basis that the Town Council are requisitioned by Stirling County Council for the county services in the Burgh, thus laying a high proportion of the county expenses on

the Burgh, although it is concealed in the poundage equivalent of the requisition. At present this is not so with water supply, which is a burgh service, and high valuation can mean relatively low water rates. These advantages have kept the poundage of the local water rates low. But if the Town Council were to continue as an independent local water authority they would have to incur heavy capital expenditure on the contemplated expansion of their undertaking, and the financial position would not necessarily remain as favourable as it is today. The only reasonable view that can be taken at this stage is that it is too early to say that membership of a regional water board will be to Grangemouth's financial disadvantage or that it will not. Several local authorities who, from one cause or another, have relatively low water rates have expressed the view that there should be a period of preferential rating on regionalisation coming into effect. We are not opposed to such an arrangement for a transitional period and set out further our views on this matter in paragraphs 169-175.

119. The remaining objection raised by Grangemouth Town Council, namely, that looking to the size and efficiency of their water undertaking there could be no real case for merging it in a wider regional organisation, invites the easy answer that there are local water authorities in other parts of Central Scotland which serve larger and much more heavily populated areas than Grangemouth and are no less efficient, yet who are prepared, and indeed anxious, to sink their identity in a regional water board and pool their resources with those of neighbouring authorities. But apart from this, we think that there is an issue here of general importance.

120. The suggestion that a particular water undertaking should be allowed to continue its separate existence rather than be included in a regional framework because it is large and efficient seems on the face of it a reasonable proposition but in fact it cuts across the whole conception of rationalisation. As we have explained earlier, the best use is not being made of the existing resources available to the water service in Central Scotland because of the absence of unified control and co-ordination, and because individual water systems are being operated separately which could be more effectively and more economically used in combination. We have recommended, therefore, that in the public interest the system should be rationalised by pooling existing resources and by developing new sources, not for the sole benefit of particular authorities but for the common good. In this context rationalisation, if it is to achieve its purpose, must involve the inclusion of all the authorities in a given area within a regional organisation and of all their resources within a single pool in the region. To the extent that any of the authorities are left out or are allowed to play separate rôles with the supplies available to them, to that extent rationalisation fails and the old inflexibility and lack of co-ordination remain. Commendable, therefore, as a record of efficiency undoubtedly is, we cannot accept it as justifying the exclusion of an authority from a regional scheme. On the contrary, we would regard it as a good reason for including them. For, as in industry and commerce, it is round the more efficient units and not the less efficient that rationalisation must build. The Federation of British Industries touched on this in their written evidence. In criticising defects in the existing system the Federation expressly exonerated certain efficient authorities from blame, "but we do suggest" they said "that the national machinery of water supply and distribution as a whole has suffered in having no means of ensuring that the knowledge, techniques and often spare resources of these authorities could be drawn upon by the others." In our view, once the public interest has

been invoked as justifying the regionalisation of the water service in any area the onus lies, not on the Secretary of State to show good reason, other than the public interest, for bringing in a particular authority, but on the authority to show good reason why, despite the public interest, they should be left out.

121. It is only fair to Grangemouth Town Council to close this part of our report with the following comment made by their leading representative in oral evidence: "I think we must agree that if it was in the public interest to have a number of regional boards, then nobody in Grangemouth would say 'It may be all right in the public interest but not in Grangemouth's interest'. I think we are sufficiently public-spirited to believe that once a committee such as yours has made certain recommendations and they have been accepted and commented upon and the ultimate is a series of boards, then we would have to accept it."

8. Boundaries of Certain Regional Areas

122. We return now to the specific questions, noted in paragraph 98, affecting the boundaries of regional water areas which emerged from the evidence submitted to us by local water authorities and other bodies.

SUGGESTED SINGLE WATER REGION IN CENTRAL SCOTLAND

123. We had the benefit of a close discussion with representatives of the Institution of Water Engineers (Scottish Council) about their proposals, summarised in paragraph 95, for the creation of a single regional board responsible for the supply and distribution of water throughout the whole of the industrial belt from Ayrshire and Renfrewshire in the west to East Lothian in the east, including Glasgow and Edinburgh, but divided into some six sub-areas for purely administrative purposes. It became clear from this discussion that, as is probably natural, the Council's approach to the question of the re-organisation of the water service in Central Scotland is primarily an engineering one, and that while the framework which they suggest might have advantages from the engineering point of view it would, in our opinion, be unacceptable in other important respects.

124. Stated briefly, the Council's proposal is that there should be a comparatively small regional board responsible for the whole area from coast to coast who, with their chief officers, would be concerned only with major policy questions such as the development of new sources of supply, water charges and water byelaws, and that local administrative and operational work would be delegated not to sub-area boards but to sub-area officials. The Council is divided as to how the members of the board would be appointed: some favour local authority nomination; others would prefer the board to consist of men selected—perhaps by the Secretary of State—for the personal contribution they can make, men capable of taking broad policy decisions and leaving administration to the professional officers. The board would fix a uniform charge for water throughout the whole area. This the Council regard as a basic requirement since, in the past, engineering solutions to problems of supply and the development of sources have invariably been affected by the impact that the cost of the projects would have on local rates. Under the Council's proposals

the local authority would have no financial responsibility: the nexus would be between the board and the consumer: though, if need be, the local authority could collect the uniform charge on behalf of the board until some other system could be devised. A set-up of this character would, in the Council's view, be in the interests of the national planning of the water service in the area and would get rid of the friction which, they say, has so often been manifested in the past among local water authorities, their engineers and consumers in relation to the water supplies of their respective districts.

125. These proposals give us difficulty in several respects but most of all because of the revolutionary change in the nature of the organisation and control of the water service that they would apparently involve. By long tradition water supply in Scotland has been regarded as a service properly entrusted by statute to the elected local authorities to be administered by them as the very basis of the public health. But if the existing local water authorities in the industrial belt were to be replaced by a single regional board consisting wholly or partly of non-elected members, however fitted they might be to perform the duties of their office, the water service would cease to be a public health service as we now know it and would become, in the context of the Council's proposals, primarily a technical organisation akin to the organisation responsible for the supply and distribution of electricity. As an essential of the public health, however, water is to be distinguished from both gas and electricity, and we cannot recommend the acceptance of any proposals which would take responsibility for its supply and distribution out of local authority control.

126. Even if the members of the single regional board suggested by the Council were local authority nominees we should still not be able to recommend acceptance of the proposed structure. There are about 70 local authorities in the area at the present time: clearly they could not all be directly represented on a single board of any reasonable size: some would either be inadequately represented in relation to the importance of their existing water undertakings or would not be represented at all: and there would be a real danger of friction arising from the fear that the policy of the board would be dictated by the chosen few. We think that it is essential at this stage of the evolution of the water service that each local authority should have a say in the affairs of the regional water board of which they may be a constituent member: if we may adapt the democratic slogan, there should be no requisitioning without representation.

127. Apart from these difficulties in relation to the composition of the proposed board, a regional area stretching right across the industrial belt and including the cities of Glasgow and Edinburgh would, in our opinion, be too large for efficient administration. The Council themselves concede it to be necessary for engineering efficiency to split the region into six sub-areas, but they justify the proposed creation of a single administrative region by reference to over-all policy requirements. In particular, they consider that a single region is necessary in order to cut out competition for new sources and to facilitate the fixing of a uniform water charge. We agree that there must be co-ordination in the development of new sources and in paragraph 63 we have recommended how this can readily be achieved. We have given some thought to the proposal that there should be a uniform water charge over the whole of Central Scotland but we are not convinced that in present circumstances this is a practicable proposition. But even if it were, the resulting benefits would not in our view

outweigh the grave disadvantages inseparable from an administrative structure on the monolithic pattern which the Council suggest. Nevertheless, we would agree on the desirability of taking all possible steps to reduce the disparity that exists in water rates and charges throughout the area. Indeed, we should expect that, if not immediately at least in the foreseeable future, much will be achieved in this direction within each of the regional water areas into which we later suggest that Central Scotland should be divided. This seems to be the natural step to take in the first place, leaving the question of the practicability of fixing a uniform charge on a wider basis to be considered in the light of the experience gained by the various regional water boards.

128. To sum up, we believe that the creation of a system of autonomous source-to-tap regional boards across the central belt and of a separate board to develop distant water sources for the area as a whole, with the trend of policy in the future moving towards the levelling out of the water charges made by the various boards, would go a long way towards achieving the results which the Council have in mind.

WEST LoTHIAN COUNTY

129. As we have indicated earlier in this report the water service in the County of West Lothian, including the burghs in it, with the exception of Bo'ness, is already integrated as a source-to-tap organisation in the West Lothian Water Board. In these circumstances we are concerned to consider only whether this Board, with Bo'ness included, should continue its separate existence or whether there is any need for its area to be joined with a neighbouring area for supply and distribution purposes under a combined regional water board.

130. Bo'ness is surrounded by land within the Water Board's area of supply and the sources from which the Burgh is served lie in West Lothian some four miles to the south of Linlithgow; the Town Council of Bo'ness supply about 0.15 m.g.d. from these sources in bulk for distribution in part of the Board's area. The Council have no resources from which they could meet any sudden and substantial demands for water from industry and it is doubtful whether they could, by themselves, afford to develop a worthwhile source for their own needs. In these circumstances we do not think that there could be any justification, in the context of the regional structure which we are recommending, for the continuance of Bo'ness as an independent local water authority. *We therefore recommend that the Burgh should be integrated with the rest of West Lothian in whatever regional water area the County may be included.*

131. The West Lothian Water Board as it stands serves a population of about 88,000 and is of a size which in the light of modern requirements we do not regard as viable. Certainly the Board is having its difficulties. Faced with an upsurge of industry within its boundaries and with potential responsibility for providing water for the new town of Livingston it has no reserve supplies. Its total resources at the moment are about 5 m.g.d.; it estimates that its needs will be about 12 m.g.d. in 1971, and 17 m.g.d. in 1981. As a palliative the Board is proceeding with the construction of a new reservoir on the West Water in Peeblesshire which will yield about 4 m.g.d. Otherwise it is looking to the development of the Loch Lomond scheme to meet its long-term needs. The present meter rate in the Board's area is 2s. 0d. per thousand gallons and the domestic water rate in the landward area of the County is 2s. 6d. in the £. We

were told by the Board's representatives that, with the heavy expenditure that lies immediately ahead of the Board in connection with the West Water and Loch Lomond projects, the County Council's domestic water rate might rise as high as 6s. 9d. in the £.

132. The Board appreciates that it must co-operate with other local water authorities to secure supplies from Loch Lomond and indeed it has been anxious all along to do so. It does not think it necessary, however, to combine with any other authority for distribution purposes and it wishes to preserve its identity as a separate source-to-tap water board. It admits that it is about to enter into a difficult transitional period during which it may have to seek help from other authorities until the water from Loch Lomond begins to flow. It looks forward, however, to a growth of strength with the expansion of industry throughout the County and with the increase of population and rateable value that will result from the development of the new town at Livingston. When this is completed the population supplied by the Board should have risen to about 160,000 which the Board would regard as a viable level for an autonomous regional water board. If it were considered that it would be in the public interest that West Lothian should be included in a wider regional water area the Board would accept amalgamation on that basis, but at the moment it does not feel that this is necessary.

133. After a close examination of the factors involved we have come to the conclusion that we could not with confidence recommend that the West Lothian Water Board should continue its separate existence as a regional water board in the central area. The Board is, in our opinion, too small an administrative unit as it stands to fill the rôle of an independent local water authority. Several undertakings in Central Scotland serving much larger populations than the 88,000 in the West Lothian area will be merged in wider regional organisations, if our recommendations are accepted, and the evidence which we have received shows that these larger local water authorities recognise the need for combination with neighbouring authorities to secure the unification of administration and resources which is necessary for the efficient operation of the water service under modern conditions. Even with an increased population resulting from the development of the new town at Livingston the West Lothian Water Board area would not, in relation to the financial implications of its future water commitments, be a viable unit. In any case, this level of population is a long-term objective since it will probably be some 20 years before the new town will have grown to its designated size with a population of 70,000. In the meantime we are concerned lest in an area such as the County of West Lothian which has been chosen for industrial development in the national interest, difficulties of water supply or rising rates should ever seriously hinder that development. It seems to us essential, in the interests not only of the economy of the central area but of the national economy as a whole, that all possible steps likely to improve the industrial facilities in this developing area should be timeously taken and among these we would under present circumstances give a high priority to the need for including the County in a wider regional water organisation.

134. The question then is with which area should West Lothian be joined for water supply purposes? In searching for an answer to this question we considered whether the solution might lie in merging West Lothian with Stirlingshire and Clackmannan. The possibility of such a combination suggested itself when we were examining the special circumstances in the north-west corner of West Lothian, excluding Bo'ness. This small area lies west of a line drawn

generally northwards from a point where the northern boundary of Linlithgow Burgh leaves the River Avon, along the western boundary of Kinneil Wood until it meets the Firth of Forth. It consists of flat agricultural land and is not yet piped for distribution purposes by the West Lothian Water Board. The area has, however, considerable potential for industrial development and we understand that the first stage of this new growth is imminent. It is clear that the character of the area is likely to be radically changed before long and that large supplies of water will have to be provided within it. It can readily be supplied with water from mains in the landward area of Stirlingshire and in Grangemouth, whereas it would be an expensive and uneconomic matter for the West Lothian Water Board to extend its distribution system to serve this small area from its existing sources. The Board's representatives who came to see us expressed the view that the capital expenditure that would be involved in doing this would not be justified and that it would be more economical if the required supplies were brought from one of the Stirlingshire sources. We agree with this view: to lay a separate main from an appropriate point on the West Lothian system to serve this area would be both expensive and wasteful. But whereas the West Lothian representatives spoke of negotiating for a permanent supply with the authorities concerned we think that this is a case where county administrative boundaries should yield to technical realities, and *we therefore recommend that the north-west corner of West Lothian should be brought within the area of supply of the regional water board which under our proposals would serve Stirlingshire.*

135. We did not find, however, that conditions favourable to combination with Stirlingshire such as exist in the north-west corner of West Lothian extend to the rest of the County. It is true that if the Loch Lomond project matures the trunk supply main from this source will pass through Stirlingshire into West Lothian and that there will then be a supply link between the two counties. But, because of the existence of the high ridge to the north-west of Bathgate which separates the Counties and would make it difficult to bring sizeable quantities of water over to West Lothian from Stirlingshire sources, we were forced to the conclusion that there could not be any natural link between them for distribution purposes, and for this reason we decided that we would not be justified in recommending that West Lothian as a whole should be included in the regional water board for Stirlingshire.

136. In these circumstances we considered what appeared to us to be the only practicable alternative—the combination of West Lothian with Edinburgh and Midlothian in a unified water organisation. On this we had the benefit of a discussion with representatives of the Edinburgh Corporation Water Committee who came to see us about the terms of our remit. The sources from which Edinburgh and Midlothian are at present watered lie in Midlothian itself and in Peeblesshire, and quite recently the Corporation were authorised to construct a new reservoir on the Fruid Water in the latter County. The Corporation expect that when this new source is available the supplies required for their existing area will be assured until about 1979. It is their present intention that the increase in their needs after 1979 will be met by the development of other sources in the Tweed basin where, they say, ample resources are available for Edinburgh, Midlothian and the Border counties of south-east Scotland. As it is to the south-east, then, that Edinburgh and Midlothian look for future supplies it is with local water authorities in the south-east that the Corporation feel that they have a community of interest, and not with authorities in the west. In this context the deputation told us that they saw no technical features which would

suggest a natural link between Edinburgh and Midlothian on the one hand and West Lothian on the other, and that the Corporation had not considered the question of such a combination.

137. While we appreciate the grounds on which the Corporation base this appraisal, we suggest that there are factors which would justify some modification of it. Taking conditions as they are, with Edinburgh and Midlothian drawing their present supplies mainly from sources in the south-east and with the development of other sources in the Tweed basin in contemplation, we would not seek to deny that the Corporation have a community of interest with local water authorities in the south-east of Scotland. But looking also to conditions as they are likely soon to become, with the development of the new town at Livingston and the growth of industry in the Calders district of Midlothian creating new demands for water the great bulk of which must be met from sources in the west, the Corporation cannot in our view avoid being involved in the west as well as in the south-east as a local water authority.

138. Indeed, we think that the Corporation's obligations at Livingston are of crucial importance in considering the re-organisation of the water service in this part of the central belt. The area of the new town lies partly in Midlothian and partly in West Lothian; responsibility for watering the Midlothian part rests with the Corporation and for the West Lothian part with the West Lothian Water Board; but while the Corporation wish to retain the Midlothian part within their area of supply they have asked the Board to undertake the watering of it on their behalf at least in the early years. In the context of this report such a situation seems to cry out for rationalisation. In our view it would be wrong in an experiment of social and industrial planning such as the creation of the new town signifies to contemplate a divided control of the water service in this area, when elsewhere in Central Scotland experience clearly voices the need for unified control wherever this is possible. We are satisfied, therefore, that in the interests of efficiency, responsibility for the water service in the area of the new town as a whole should be unified in the hands of a single local water authority. Since in our view the area of the West Lothian Water Board, even with the inclusion of the new town as fully developed, would not be a viable water supply unit, the responsibility should, we think, be undertaken by the Corporation of Edinburgh as being the other local water authority concerned with the supply of water to this area. *We therefore recommend that the Corporation's area of supply should be extended to include not only that part of the new town which lies in West Lothian but also the remainder of the County (with the exception of the north-west corner) which cannot logically, in the light of what we have already said, be separated from the new town for water supply purposes.*

139. In making this recommendation we are influenced by another factor, namely, the opportunity of lending greater flexibility to the water supply arrangements in the western part of the Corporation's existing supply area, particularly in the Calders district of Midlothian. The representatives of the Edinburgh Corporation Water Committee told us that it would be the Corporation's intention to meet demands for water arising as a result of the development of this district from sources in the Tweed basin. We are advised, however, that to bring water from the Tweed round the high land at the north-eastern end of the Pentland Hills into the Calders may be neither the most practical nor the most economical way of watering this area, especially if supplies become available from Loch Lomond at Livingston on the West Lothian-Midlothian border. We understand that to carry water from this source across the county

boundary would present no technical difficulty and if, as we recommend, the two Counties were included in the same area of supply, we would not visualise any administrative difficulty arising. For the rest we believe that it would prove to be a far-sighted policy to develop the water service for the Edinburgh group of authorities as a flexible system based on complementary sources, the City and south and east Midlothian being watered from the present sources to the south, and West Lothian and the north Pentland area of Midlothian from sources to the west.

140. Such briefly, as we see it, is the technical case for the absorption of West Lothian into the Edinburgh Corporation area of supply. From this point of view, amalgamation would confer advantages alike on West Lothian and on Edinburgh and Midlothian. But in formulating our recommendation we have been exercised as much by financial as by technical considerations. We have felt at liberty to take financial considerations into account since an amalgamation of local water authorities on a broader financial basis might in certain circumstances be what is necessary, in the words of our remit, to facilitate measures for securing an efficient and economic supply of water in the central area. This is what is necessary in the circumstances of West Lothian. As we have explained in paragraph 131, the meter charge and domestic water rates in the County, which are already high, are bound to increase as a result of expenditure on the development of the West Water reservoir and indirectly on the Loch Lomond project, and unless effective steps are taken to keep the rates and charges within reasonable bounds the industrial development of the area may be seriously prejudiced. Amalgamation with Edinburgh and Midlothian would provide the remedy. In 1961-62 the meter charge in West Lothian was 2s. 0d. per thousand gallons compared with 1s. 0d. in Edinburgh and Midlothian: in the same year the domestic water rates in West Lothian varied from 8d. to 2s. 6d. in the £, compared with a range from 6d. to 10d. in Edinburgh and Midlothian. Because of the many imponderables involved it is not possible to forecast what the precise financial effect of extending the Edinburgh Corporation's limits of supply to include West Lothian might be but, looking to the high rateable valuation over which the West Lothian expenditure would then be spread, the financial impact on Edinburgh and Midlothian would not in our view be substantial.

141. We should expect that no part of the West Lothian burden would have to be carried by ratepayers in Edinburgh and Midlothian before, say, 1967-68 partly because it would not be until then that the financial effect of the expenditure on the West Water and Loch Lomond schemes would begin to be noticeably reflected in the rates and partly because there should not be in the interval any reduction of rates in West Lothian at the expense of the remainder of the area. Indeed, it would not be unreasonable that the rates in West Lothian should be allowed to rise to a somewhat higher level than that at which they now stand before any spread of the burden takes place. It would be for the authorities concerned to negotiate the precise terms of the financial arrangements to be made but what is in our minds is an agreement on the pattern of that made between the Corporation and the County Council of Midlothian in 1949. We understand that this provides for the pegging of the water rates in Midlothian at a maximum level for what we describe in paragraph 174 as a running-in period before the financial benefit of amalgamation accrues with the fixing of a uniform charge throughout the whole area of supply.

142. A rise in rates, even though moderate and gradual, is never welcomed

but it can be accepted the more readily if it can be shown to serve a worthwhile public purpose. Here the purpose would be to spread a financial burden over a wider rating area not only in the interest of the industrial prosperity of the Lothians but for the good of the Scottish economy as a whole. We should hope that our proposals would be accepted on this basis.

143. We should make it clear that it is not our intention that the addition of West Lothian to the Edinburgh Corporation's area of supply should necessarily involve the creation of an entirely new administrative structure in the shape of a regional water board for the extended area. As we have mentioned elsewhere the Corporation Water Committee is not a joint water board: it is a Committee of the Corporation, but one-third of its members are nominated by the County Council of Midlothian and the councils of the five small burghs in the County. Otherwise, the Committee performs in substance the functions of a source-to-tap regional water board in its area. We should expect that the Corporation, as the predominant partner in the undertaking, would wish to continue this form of constitution making provision for the inclusion in the membership of the Water Committee of an agreed proportion of representatives from the West Lothian authorities. If this should be the wish of the authorities concerned we recommend that the Secretary of State should agree.

DUNBARTONSHIRE (DETACHED) AND WEST STIRLINGSHIRE

144. Dunbarton County Council represented to us that the eastern, or detached, portion of the County should form part of the area of a regional water board for the whole of Dunbartonshire: the Stirlingshire and Falkirk Water Board on the other hand took the view that since this area at present gets the whole of its water supply from Stirlingshire sources it should be part of the area of a regional water board for Stirlingshire.

145. The population of the landward part of Dunbartonshire (detached), though at present only about 12,000, will rise to nearly 80,000 with the development of the new town of Cumbernauld. The present supply of water available in the area is 2.05 m.g.d. received from the Stirlingshire and Falkirk Water Board: the present consumption is 0.95 m.g.d. so that the balance available to meet future needs is 1.1 m.g.d.: but the County Council estimate that the needs of the area will have risen to about 3.3 m.g.d. in 1971 and to 5.6 m.g.d. by 1981.

146. The existing supply is carried by a main which leaves Stirlingshire near Castlecary, proceeds to near Cumbernauld and from there to Twechar in Dunbartonshire, then passes again into Stirlingshire to supply Lennoxton and Strathblane. The Stirlingshire and Falkirk Water Board argue that their supply pipe is already there, embedded in the existing system, that this should remain the supply pipe for Dunbartonshire (detached), and that the area should be included in the Stirlingshire regional water board.

147. Against this, Dunbarton County Council say that a Dunbartonshire regional water board which did not have the detached portion of the County within its area would not be a viable unit. The population of the remaining portion of the County—the western portion—excluding the areas watered by the Corporation of Glasgow, is only about 130,000, whereas the population of the area of a Stirlingshire board, if it included Dunbartonshire (detached) would be about 280,000 or 290,000. The County Council doubt whether a board serving a population of only 130,000 would be strong enough to carry a full

complement of technical staff. Next, they point out that in order to get water from Loch Lomond to the central area of Scotland the trunk main must pass through Dunbartonshire (detached) and it would be as easy then for a Dunbartonshire board to water this area from the Loch Lomond supply as it would be for a Stirlingshire board to do so partly from Loch Lomond and partly from a source in Stirlingshire. Indeed, Dunbartonshire opinion would expect it to be an essential feature of any project to use water from Loch Lomond for supply purposes in Central Scotland that the detached portion of their own County should be seen to benefit directly from this source. When a supply from Loch Lomond becomes available the 2.05 m.g.d. at present supplied by the Stirlingshire and Falkirk Water Board would be released for use in Stirlingshire. For the rest, on general grounds the County Council think that their County "should be as one" in a single Dunbartonshire regional area so that its water supply may be the subject of unified control by a single regional water board.

148. *Having considered these views we recommend that the balance of advantage lies in linking the detached portion of Dunbartonshire with the rest of the County of Dunbartonshire to be the area of supply of a Dunbartonshire regional water board.*

149. A further point arises, however, with regard to an area in west Stirlingshire. West Stirlingshire is at present supplied with water which Stirling County Council buys in bulk from the Stirlingshire and Falkirk Water Board. The supply to the area south of the Campsie Fells is fed into the County at Twechar through a main laid jointly by Stirling County Council and Dunbarton County Council across Dunbartonshire (detached) from Castlecary—the main already referred to in paragraph 146; the supply to the Balfron, Killearn and Drymen areas is fed from a filter station at the western end of Carron Reservoir. These two supply points have been linked together by a main laid through Lennoxtown, Strathblane, Killearn and Balfron; the size of this main tapers from 15" diameter at each supply point down to only 6" diameter at a point between Strathblane and Killearn where under normal conditions the boundary between the two areas of supply lies. Because of the sizing of this loop main, it is not possible to meet the whole of the needs of west Stirlingshire from one supply point or the other and, this being so, it is essential that whatever arrangements are made they should avoid competing claims for the use of the joint mains passing through Dunbartonshire (detached). *We recommend, therefore, that the portion of west Stirlingshire which lies south of the Campsie Fells and Kilsyth Hills should form part of the area of a Dunbartonshire board.*

150. If this recommendation is accepted the boundary between the Dunbartonshire and Stirlingshire boards' areas might appropriately start at the most northerly tip of the Dunbarton County (detached) boundary near Castlecary and be drawn generally in a north-westerly direction along the present boundary of the Stirlingshire and Falkirk Water Board's supply area until it reaches the watershed of the Kilsyth Hills and Campsie Fells; and thence almost due west along the watershed until it strikes the Blane Water roughly midway between Strathblane and Killearn. Thereafter, it would follow the line of the Blane and Endrick Waters until it reached the boundary between the main part of Dunbartonshire and Stirlingshire. Limits of supply based on these boundaries would simplify the operation of the existing distribution system since no new piping would be required in either Stirlingshire or Dunbartonshire (detached) when the supply to the latter area has to be augmented from the Loch Lomond Scheme. Loch Lomond water would simply be used to replace the water at present obtainable from the Stirlingshire and Falkirk Water Board

in the joint pipeline which would then be valved off at the county boundary. The economy of such an arrangement lies in the fact that if the expanding Lennoxtown/Strathblane area were to continue to be supplied by a Stirlingshire board a duplicate main would have to be laid from Banknock to Queenzieburn at a cost of about £100,000. The suggested boundary would also ease the problem of supplying a portion of Stirling County which lies to the west of the Endrick and Blane Waters. This portion of the County cannot readily be supplied from Stirlingshire but it could be supplied without difficulty from the existing Clydebank and District Water Trust works at Burncrooks which we propose should become the responsibility of the new board for the whole of Dunbartonshire.

FIFE COUNTY

151. What is to be considered here is whether the Burghs of Newport and Tayport and the neighbouring landward area of Fife should remain within the limits of supply of the Corporation of Dundee, who indeed suggest that in addition they should operate even more deeply into the County, or whether the whole of Fife should lie within the same regional water area.

152. The Corporation's existing statutory limits of supply in north-east Fife comprise the Burghs of Newport and Tayport, the parishes of Ferry-Port-on-Craig and Forgan, and part of the parishes of Balmerino and Leuchars. The population in this area is just over 7,000 and the present consumption of water about 0.32 m.g.d.; the service is on a source-to-tap basis. The Corporation expect that with the construction of the new Tay Road Bridge there will be an upsurge of housing and industrial development in this area and that there will be large-scale commuting to and from the City in the foreseeable future. To meet present and future demands they have planned to lay a 24" diameter pipe across the road bridge and to carry out other works including the construction of a new service reservoir which would enable them to quadruple the present supplies available in the area to provide 1.5 m.g.d. This would be a gravity feed intended primarily for the Corporation's existing area of supply in the north-east corner of the County but which could be augmented in order to supply the whole of north Fife stretching as far as St Andrews, Guardbridge, Cupar and Leuchars. In oral evidence the Corporation's representatives pointed out that Newport and Tayport, both lying within their area of supply in north Fife, are only about two miles from the centre of Dundee whereas to serve these Burghs from Fife sources would involve the laying of mains for a distance of about 30 miles from the Glenfarg and Glendevon reservoirs: and they suggested that as supplies were short in the County the regional water board to be set up for the area should concentrate their operations in the west of Fife and in Kinross, leaving the north and east of Fife to be supplied from the Dundee undertaking. Representatives from Newport Town Council, who accompanied the Dundee representatives, told us that the Corporation had supplied water to Newport since 1878; that the supply was satisfactory in quantity and quality; that the administrative relationship between the Corporation and the Town Council was harmonious; and that the Council did not wish the existing arrangements to be disturbed.

153. The evidence which we received from Fife County Council lent no support to the case submitted by the Corporation of Dundee so far as this rested on an existing or potential shortage of water in the County. The County

Council gave us figures relating to the undertakings of ten of the local water authorities in Fife representing about 93 per cent of the total population. The present resources of these ten authorities amount to 23.8 m.g.d.; their present consumption is 19.6 m.g.d.; so that they have at the moment a net surplus of 4.2 m.g.d. The consumption of water in the areas of these ten authorities is expected to rise from 19.6 to 24.8 m.g.d. in 1971, to 31.4 m.g.d. in 1981, and to 39.8 m.g.d. in 1991. To meet this rising demand the County Council have in mind the construction of intakes and a new reservoir on the Water of May in Perthshire which would provide an additional supply of 5 m.g.d. (or possibly 10 m.g.d. although it might be uneconomic to develop it to that extent) raising their total resources to 28.8 m.g.d.—sufficient to meet their needs until about 1980. Thereafter the County supplies would be augmented from other Perthshire sources. Representatives of the County Council told us that the Council were in a position to supply the needs of the north-east corner of the County at present within the limits of supply of the Corporation of Dundee, and that they could do so at relatively little capital cost. But they recognised that from the purely engineering point of view there was a case for continuing the present arrangements, and the Council would therefore not be averse to the Corporation's proposals in this respect. The Council would, however, strongly object to the Corporation's limits of supply being extended more deeply into the County to take in an area stretching as far as St Andrews, Guardbridge, Cupar and Leuchars. This they would regard as an intrusion which could not be justified by any technical or supply difficulties existing in the County.

154. *We recommend that the Corporation of Dundee should continue to supply and distribute water in the area in north Fife already included by local Act in their area of supply.* It would no doubt make for administrative tidiness if the whole of the County of Fife were to be served by the same regional water board, but we are satisfied that the balance of advantage lies in maintaining the *status quo* in this particular area. From estimates given to us by both the Corporation of Dundee and the County Council of Fife it does not seem that there would be much difference in the cost of the work proposed by the Corporation to improve and augment their existing system in the area and the cost of the work which the new regional water board would have to undertake to provide a comparable supply from sources on the Fife side. We were impressed in this connection with the Corporation's argument that, while they would probably not object if the area was taken away from them, it would surely be better in the wider national interest with a vast potential surplus in the Angus hills for the Corporation to bring water south into their existing limits of supply rather than for Fife to put a further strain on their resources by bringing supplies northwards. But apart from this, with the obsolescence of the existing main across the Tay railway bridge, we think that it is important to take the opportunity of the construction of the Tay Road Bridge to provide a new pipeline which would maintain a water supply link across the estuary for strategic reasons or to meet a local or national emergency. We cannot, however, accept the proposal of the Corporation of Dundee that the limits of supply of their undertaking should be extended more deeply into north Fife. We were not persuaded on the evidence led that this was necessary for the efficiency of the water service in what would be the extended area, and we are satisfied that responsibility for supply and distribution in this area should be entrusted to the proposed regional water board in Fife.

155. For the rest, the Fife County Council's representatives explained with regard to the proposal that the County of Kinross and the Burgh of Kinross

should be included in the same regional water area as the County of Fife that this seemed logical in respect that the trunk main serving Fife from Glenfarg Reservoir traverses the County of Kinross in the north, while that from Glendevon Reservoir does so in the south. We agree with this view. At present only a few small individual supplies are given off from the mains traversing Kinross-shire but Fife County Council stated that they have adequate supplies available from their existing sources to meet the needs of the area. *We do not think that Kinross-shire, because of its small size, could form a viable unit on its own for water supply purposes and we accept the suggestion made by Fife County Council that the County of Kinross and the Burgh of Kinross should be included in the same regional water area as Fife. We recommend accordingly.*

9. Areas of Proposed Regional Water Boards

156. We have now reached the stage of giving the short answer to the question posed in our remit. We were asked to examine the present administrative control of the water service in Central Scotland and to recommend how far it might be desirable to draw local water authorities together with a view to facilitating measures for securing an efficient and economic supply of water adequate for all purposes throughout the area. We have found that there is an unnecessarily large number of local water authorities in the area and that the majority of them, judged by modern standards, are too small and financially too weak to fill the role of independent local water authorities satisfactorily; we have found that the structure in its present form encourages a degree of inflexibility and a lack of co-ordination in administration which is not in the public interest; and we are satisfied that individual water systems are being operated separately which could be more effectively and more economically used in combination.

157. To remedy these defects and to provide an administrative structure capable of dealing efficiently with the problems connected with the proposed scheme for bringing water into Central Scotland from Loch Lomond, or, indeed from any other major source of common interest, we have concluded that it is necessary to replace the existing multiplicity of independent local water authorities by a small number of autonomous regional water boards which would exercise a unified control over both the supply and distribution of water in their respective areas. In considering what should be the areas of these regional water boards we have had regard not only to existing local government boundaries but also to physical features and technical considerations which make it desirable in certain cases to depart from these boundaries.

158. We have not thought it necessary to recommend any basic change in the administrative structure of the water undertakings operated by the Corporations of Glasgow and Edinburgh. Both of these Corporations, as independent local water authorities, supply and distribute water not only within their respective city boundaries but also in neighbouring landward and burghal areas; and both have represented to us that having regard to the extent and composition of their areas of supply, they are already operating on a regional basis. We accept these representations and agree that the two Corporations and local authorities associated with them should be regarded for the purposes of this report as constituting source-to-tap regional water organisations. In both

cases, however, we recommend changes in the limits of supply, as distinct from the administrative structure of the undertakings. We have already recommended that the limits of supply of the Edinburgh Corporation should be extended to include the greater part of the County of West Lothian, with the burghs in it. As regards the Glasgow limits of supply, the Corporation already supply parts of the Burghs of Rutherglen, Barrhead, Renfrew, Milngavie and Bearsden; *it would be reasonable and sensible that where it is technically possible they should be responsible for supply and distribution throughout the whole of these Burghs; and we recommend accordingly.*

159. *To sum up, we recommend that a source-to-tap regional water board or its equivalent should be responsible for the unified control of the supply and distribution of water in each of the following areas:*

(a) **GLASGOW AREA.** The whole of the City of Glasgow; the Burghs of Rutherglen, Barrhead, Renfrew, Milngavie and Bearsden (where it is technically possible); and the areas in the Counties of Lanark, Renfrew, Stirling and Perth at present included within the Corporation's limits of supply.

(b) **EDINBURGH, MIDLOTHIAN AND WEST LOTHIAN.** The whole of the City of Edinburgh, the landward area of the County of Midlothian and the burghs in the County; the landward area of the County of West Lothian (with the exception of the area in the north-west corner, defined in paragraph 134) and the burghs in the County.

(c) **FIFE AND KINROSS.** The whole of the landward part of the County of Fife and the burghs in the County (except the Burghs of Newport and Tayport and that part of the landward area in the north-east of the County which are within the limits of supply of the Corporation of Dundee); the whole of the landward part of the County of Kinross and the Burgh of Kinross.

(d) **STIRLINGSHIRE AND CLACKMANNAN.** The whole of the landward area of the County of Stirling and the burghs in the County except the Burgh of Kilsyth and the landward area in west Stirlingshire lying to the south of the Campsie Fells and Kilsyth Hills which we have defined in paragraph 149; the whole of the landward area of the County of Clackmannan and the burghs in the County; the north-west corner of West Lothian which we have defined in paragraph 134.

(e) **DUNBARTONSHIRE.** The whole of the landward area of the County, including the eastern or detached part, and the burghs in the County with the exception of Milngavie and Bearsden, together with the Burgh of Kilsyth and the landward area in west Stirlingshire lying to the south of the Campsie Fells and Kilsyth Hills which we have defined in paragraph 149.

(f) **LANARKSHIRE.** The whole of the landward part of the County (with the exception of the area at present served by Glasgow Corporation), and the burghs in the County (except the Burgh of Rutherglen), being the areas of the constituent members of the Dacer Water Board, together with the Burghs of Biggar and Lanark.

160. The net effect of these recommendations would be that 53 local water authorities in the Counties of Clackmannan, Dunbarton, Fife, Kinross, Lanark, Stirling and West Lothian would be replaced by six regional water authorities. The local authority areas which would be served by these regional authorities

are listed in Appendix III. The six regional areas are shown in the map at Appendix V and a comparison of this map with the map at Appendix IV gives a rough visual impression of the extent to which the water service in Central Scotland would be rationalised if our recommendations are accepted. We are satisfied that such a grouping of the existing local water authorities in Central Scotland would secure a sound administrative structure and the ready integration of sources and distribution systems into efficient engineering units to serve the present and future needs of the area.

161. In defining the proposed regional areas we have taken no account of minor variations in the boundaries that may be desirable to continue supplies to small communities or individual consumers at present served by local water authorities other than those for the local government areas in which they are situated. Clearly, neighbouring regional water authorities should consult together to decide which of them should supply such communities or consumers on the margins of their respective regional areas.

10. Miscellaneous

AGREEMENTS MADE IN PERPETUITY

162. During the examination of evidence it came to our notice that over the years a number of local water authorities have entered into arrangements made in perpetuity for the supply of water either to other local water authorities or to individual consumers. These obligations vary widely in their scope but it is clear that in many cases the original terms and conditions have now become burdensome to the supplying authority as a result of rising costs and the ever-increasing demands made on their limited water resources. Some of the agreements involve very large quantities of water indeed and we were told of one agreement which had been in existence for about 60 years without any review of the financial arrangements being possible.

163. We do not propose to comment on the merits of the individual cases which came to our notice, since this might prejudice the position of the Secretary of State if the supplying authority were to invoke the powers available to them under the Water (Scotland) Acts to terminate these obligations. It was, however, suggested to us by one local water authority that we should consider whether or not such difficulties "might not be resolved on a national basis." We cannot authoritatively interpret the statutory powers which are already available to local water authorities to deal with obligations of this kind but it would perhaps be helpful if we were to state the position as we understand it, in particular as it would affect a new regional water board faced with taking over the assets and liabilities of its constituent members.

164. Clearly no authority or individual consumer who has had an assured supply of water under such an agreement should be deprived of that supply as a result of the responsibility for the supply having been transferred to a new regional water board. But conversely, the new board must retain the right to decide how the supply is to be provided if they are to achieve maximum efficiency and flexibility throughout their distribution system. *Similarly, the terms and conditions applicable to the supply, which may have been fair and reasonable at the time the arrangement was made, should not be imposed on the new board to which the*

obligation to supply is transferred, if changes in circumstances and the passage of time have made them now unreasonable.

165. We are advised that where a local water authority has an obligation under a local enactment to supply water to a local authority, to another local water authority or to an individual consumer, the matter could properly be dealt with in an order under section 16 of the Water (Scotland) Act, 1946, setting up the new board, which may contain such incidental, consequential and supplementary provisions, including provisions for the amendment or repeal of any local enactment, as the Secretary of State thinks necessary. Alternatively, if the matter cannot be dealt with under any other provision of the 1946 Act, a separate order repealing the local enactment could be made under section 88 of that Act. Any loss to the individual or authority concerned by the revocation of the local enactment could be dealt with either by payment of compensation or by suitable financial provisions in favour of the authority suffering the loss in relation to that authority's liabilities to the board. Similarly, a purely contractual agreement between local authorities or local water authorities (i.e., those which are not made under the terms of a local enactment) could be dealt with in an order under section 16 of the 1946 Act.

166. The position is not quite so clear, however, as regards existing contractual agreements which provide for the giving by a local water authority of a supply of water free or on preferential terms to individual consumers in return for, say, the right to abstract water or for the granting of a wayleave. Section 28(8) of the Water (Scotland) Act, 1949, provides that no local water authority may now incur an obligation to give a supply of water free or on preferential terms as defined in the Act; there is, we understand, some doubt whether this restriction would enable a new regional water board to take over any such existing obligations entered into by its constituent authorities. The existing local water authority could, before being dissolved, themselves terminate the obligation under section 28 of the 1949 Act and pay compensation in appropriate cases, but they might be reluctant to do this where, for example, the arrangement had been beneficial to them and a relationship of goodwill had been built up with the party concerned. If this were so, the position could arise where a regrouping of authorities might be impeded by the existence of agreements which the constituent authority might not wish to terminate and the new board might be unable to take over.

167. Whatever the precise legal position on this may be—and it is, we understand, open to argument—we would recommend that the most liberal interpretation be placed on the Secretary of State's powers to deal with such matters in an order setting up a new board, either by authorising the board to take over the obligation or by amending or terminating it with the payment of compensation in appropriate cases. The policy in favour of regrouping laid down in the 1944 White Paper (Cmd. 6515) and provided for in the subsequent statute should not, we think, be inhibited by any technical points and we recommend that if existing powers cannot deal fully with agreements in perpetuity additional powers should be taken for this purpose by the Secretary of State.

168. Finally, there may be agreements under which a local water authority is under obligation to supply water, for example, to an industrialist on terms which cannot be regarded as "more favourable" within the meaning of section 28 of the 1949 Act. In such cases there would seem to be no bar to an obligation of this kind being transferred to the new board in the order setting up the board.

PREFERENTIAL RATING

169. We have considered the question of preferential rating for local authorities whose water rates may rise appreciably as a result of regionalisation, and have concluded that a regional water board's expenditure should be requisitioned from the beginning on the basis of a uniform notional rating throughout the whole area of the board, except where this would be inequitable.

170. It is not uncommon in local government for transitional arrangements to be made to mitigate the impact of new provisions in cases where losses are sustained or increased burdens are imposed but in any particular instance where there is an equitable case for preferential rating it is not sufficient merely to compare the water rates of the local authority as a separate water authority with what they would be if the local authority were a constituent member of a regional water board. The matter is much more complex.

171. Water rates are in two parts. In the first place, there is the public water rate which defrays, according to the decision of the local authority, anything from one-fifth to one-third of the rate-borne expenditure. The public water rate forms part of the burgh or county rate as the case may be, and is assessed on the rateable value of all subjects in the rating area. Next, there is the domestic water rate, which defrays the remainder of the rate-borne expenditure and is levied as a separate rate on the rateable value of subjects receiving a water supply, which rateable value is modified under the provisions of the 1949 Act for certain categories of premises, such as business and commercial buildings. The amount charged for metered water supplies is restricted to the excess over the amount of the actual or assumed domestic water rate. Generally, in making comparisons it is the domestic water rate which is quoted, but a comparison is valid only if the proportion of expenditure defrayed is the same. Again, the poundage of the water rate is not the whole story because a low rate on a high valuation may be no less in its impact than a high rate on a low valuation.

172. Further, a local water authority may have bulk supply arrangements resting on agreements made some years ago, the terms of which are very favourable when regarded in the light of present conditions. A local water authority in serious need of water may have deliberately put off incurring the large capital expenditure involved in increasing supplies because of the consequential rating increase, or indeed because of the possibility of regionalisation.

173. *It is clear that many factors enter into the question of preferential rating, and we take the view that this should be granted only where it is shown beyond doubt on consideration of all the circumstances that it would be inequitable to charge the uniform rate from the beginning.*

174. On the other hand, the considerations attaching to preferential rating may well operate in reverse in certain circumstances. There may be instances, and we have in mind particularly our recommendations in regard to the regrouping of West Lothian with the Edinburgh and Midlothian water undertaking, where one authority because of the small financial base over which it can spread its expenditure would be likely to benefit substantially by amalgamating with other authorities having a high rateable valuation. It would seem to be equitable in such cases that the full financial benefit of amalgamation should not be made immediately available to the high-cost authority but that there should be a running-in period prior to the fixing of a uniform charge throughout the whole of the board's area.

175. We should hope that normally the constituent members of each regional water board would be able to settle questions of this kind themselves by amicable negotiation but where it was not possible to reach agreement the matter could be determined by the Secretary of State under the Water (Scotland) Acts.

METER CHARGES

176. The Federation of British Industries (Scottish Council) told us that great confusion seemed to exist throughout the country not only as to the basis of charging for metered supplies of water but also as to the level of the charges. The returns submitted to us show that the local water authorities in the central area levy meter charges for non-domestic water supplies which vary widely from 8d. per 1,000 gallons at the lower end of the scale to 2s. 9d. per 1,000 gallons at the upper end. From the point of view of attracting new industry to the area it is clear that these wide disparities can only prejudice the prospects of the high-cost authority. But since meter charges are presumably based on the cost to the local water authority of providing supplies to the non-domestic user the disparities are, we think, yet another result of too many separate local water authorities each making their own supply arrangements. We should expect, therefore, that as indicated in paragraph 127 in relation to water rates the creation of a system of regional source-to-tap boards across Central Scotland would go far to level out meter charges in the area.

INCIDENCE OF DOMESTIC WATER RATES ON INDUSTRY

177. The Federation of British Industries (Scottish Council) represented to us that changes in the law were called for in regard to the arrangements under the Water Acts whereby supplies for non-domestic purposes may be charged for by meter. No injustice, they say, arises where large quantities of water are used and the company pay only the excess of the meter charge over the produce of the domestic water rate on the premises. But they consider that the very large increases which have recently taken place in the valuation of industrial premises have magnified anomalies in the case of companies which use only small quantities of water and accordingly have to pay on the basis of the domestic water rate.

178. In our view these are matters which cannot properly be considered in isolation from the more general principles of rating and valuation and a detailed examination of them would not, we think, be within the scope of our remit. Accordingly we make no recommendations on them but we note as a relevant consideration that, while the domestic water rate is normally levied on one-half of the net annual value of business and commercial premises, local authorities are empowered under section 4(1) of the Water (Scotland) Act, 1949, to reduce in any year the fraction to not less than one-quarter for any particular premises.

II. Summary of Conclusions and Recommendations

179. Our conclusions and recommendations include the following:

- (1) We endorse the national water policy so far as it relates to Scotland as outlined in the White Paper of 1944 (Cmd. 6515). We agree that where joint action by neighbouring local water authorities is necessary or

desirable every effort should be made to secure it by agreement, but that if this fails the Secretary of State for Scotland should not hesitate to exercise his powers to enforce it in the public interest. (*Paragraph 16*).

- (2) There are 61 local water authorities in Central Scotland serving a total population of just over three millions. (*Paragraph 17*). The majority of these authorities, judged by modern standards, are too small and financially too weak to fill the role of independent local water authorities effectively. The administrative structure in its present form encourages a degree of inflexibility and a lack of co-ordination which is not in the public interest, and individual water systems are being operated separately which could be more effectively and more economically used in combination. (*Paragraphs 51 and 156*).
- (3) There is a rising demand for water in the area. The total consumption for all purposes is at present 230 m.g.d. and available reserves 44 m.g.d. Local water authorities estimate that they will need 289 m.g.d. in 1971, 336 m.g.d. in 1981 and 380 m.g.d. in 1991. (*Paragraph 45*).
- (4) The only practicable way of ensuring adequate supplies to meet this increasing demand is for local water authorities to combine for the joint development of suitable sources, and to share the new and existing supplies on a basis which public opinion will accept as equitable in the interest of the common good. (*Paragraph 47*).
- (5) We welcome the proposal to embark on a scheme of the magnitude of the Loch Lomond project which we consider necessary to match the rising demand for water in the central area. Such a scheme makes a major re-organisation of the administrative structure of the water service, for long regarded as desirable, a matter now of compelling urgency. (*Paragraph 50*).
- (6) A form of regional organisation is necessary to secure maximum co-ordination and flexibility in the supply and distribution of water throughout the area, maximum efficiency in management and administration, and the greatest possible simplicity in the shape of the structure. (*Paragraph 52*).
- (7) We are of opinion that a system of boards responsible only for the bulk supply of water to the existing local water authorities who in turn would be left responsible for distribution in their respective areas would not achieve that degree of unified control of supply and distribution which the service requires. (*Paragraph 54*).
- (8) We are satisfied that a system of source-to-tap regional water boards each wholly responsible for the supply and distribution of water in its area is the solution most likely to achieve to the full the objectives in our remit. (*Paragraph 55*).
- (9) Each regional water board would consist of representatives appointed by the constituent local authorities in the region from among their elected members. (*Paragraph 57*). The assets and liabilities of the various water undertakings in a region would be transferred to the regional water board. (*Paragraph 59*).
- (10) To secure co-ordination and co-operation on an inter-regional basis for the development of new major sources of water supply we recommend the appointment of a Water Development Board whose first task would be the

développement of the proposed Loch Lomond project. Initially, the Board would consist of representatives appointed by the regional water authorities in Central Scotland participating in the proposed Loch Lomond scheme, from among their elected members. (*Paragraph 63*). It is particularly important that the Board should be given power to borrow (*Paragraph 64*) and that special arrangements should be made for the financing of the scheme during the early years when the Board's income from the sale of water will not be sufficient to meet the loan charges on its capital expenditure. (*Paragraph 65*).

- (11) Responsibility for the central control and co-ordination of the water service should continue to rest in the hands of the Secretary of State. (*Paragraph 67*). To avoid unco-ordinated development in the future, regional water boards and the Water Development Board should be required to act in the closest consultation in connection with the development of new sources, and all development proposals should be subject to the approval of the Secretary of State. (*Paragraph 68*).
- (12) The weight of evidence submitted to us by local water authorities and other interested bodies supports the proposed creation of a system of source-to-tap regional water boards. (*Paragraph 72*). But opinion is divided about the delimitation of particular regional water areas. (*Paragraph 73*).
- (13) We cannot recommend acceptance of the proposal of the Institution of Water Engineers (Scottish Council) that there should be a single regional board responsible for the supply and distribution of water throughout the whole of the industrial belt, including Glasgow and Edinburgh. (*Paragraphs 125 to 127*).
- (14) The Burgh of Bo'ness should be integrated with the rest of West Lothian for water supply purposes. (*Paragraph 130*).
- (15) With regard to particular problems on which there is a division of opinion among local water authorities, we recommend:
 - (a) that Grangemouth Town Council, the County Council of Clackmannan and the town councils of the burghs in that County should become constituent members of the regional water board suggested for Stirlingshire and Clackmannan, and that responsibility for the Loch Turret Water Board's undertaking should be transferred to that board (*Paragraph 108*);
 - (b) that the area of the County of Perth to be supplied from the Loch Turret source should not be included in the area of the proposed regional water board for Stirlingshire and Clackmannan but the County Council should be safeguarded by the board as regards both the supplies and the terms they have already negotiated with the Loch Turret Water Board (*Paragraph 108*); and that Crieff Town Council should be guaranteed a supply of up to 0.75 m.g.d. from the Loch Turret scheme (*Paragraph 110*);
 - (c) that the area within the existing limits of supply of the West Lothian Water Board (with the exception of a small area in the north-west corner) and the Burgh of Bo'ness, should form part of Edinburgh Corporation's area of supply (*Paragraph 138*);

(d) that the detached portion of Dunbartonshire should be linked with the rest of the County to form the area of supply of a Dunbartonshire regional water board (*Paragraph 148*), and that the portion of west Stirlingshire which lies south of the Campsie Fells and Kilsyth Hills should be included in this regional area (*Paragraph 149*);

(e) that the Corporation of Dundee should continue to supply and distribute water in the area in north-east Fife already included by local Act in their area of supply, but that the Corporation's limits of supply should not be extended more deeply into north Fife. (*Paragraph 154*).

(16) The County of Kinross and the Burgh of Kinross should be included in the same regional water area as the County of Fife. (*Paragraph 155*).

(17) The Corporation of Glasgow, who are at present responsible for the supply and distribution of water in parts of the Burghs of Barrhead, Bearsden, Milngavie, Renfrew and Rutherglen should be responsible, where it is technically possible, for supply and distribution throughout the whole of these Burghs. (*Paragraph 158*).

(18) Subject as above, we recommend that a source-to-tap regional water board, or its equivalent, should be responsible for the unified control of the supply and distribution of water in each of the following areas:

- (a) the Glasgow area;
- (b) Edinburgh, Midlothian and West Lothian;
- (c) Fife and Kinross;
- (d) Stirlingshire and Clackmannan;
- (e) Dunbartonshire;
- (f) Lanarkshire.

(*Paragraph 159*).

(19) Local water authorities should be asked to make an early and exhaustive survey in their respective areas with the object of minimising the use of treated water for industrial purposes. (*Paragraph 38*).

(20) We are of the opinion that regional water boards should not be required to take over unreasonable obligations incurred by their constituent members under agreements made in perpetuity. (*Paragraph 164*). We recommend that a liberal interpretation should be placed on the Secretary of State's statutory powers to deal with such matters in an order setting up a new board and that, if necessary, additional powers should be taken for the purpose. (*Paragraph 167*).

(21) We consider that, normally, a regional water board's requisitions on its constituent members should be based from the beginning on a uniform notional rating throughout its whole area (*Paragraph 169*) and that preferential rating should be granted only where it is shown beyond doubt that it would be inequitable to charge the uniform rate from the beginning (*Paragraph 173*). We suggest, however, that conversely there may be cases where an existing high-cost authority would stand to benefit substantially by amalgamating with other authorities having a high rateable valuation and that in such cases there should be a running-in period before the full financial benefit of amalgamation is made available to the high-cost authority. (*Paragraph 174*).

APPENDIX I

AUTHORITIES AND ORGANISATIONS WHO SUBMITTED EVIDENCE

(Oral as well as written evidence was given by those marked*)

Local Authorities and Local Water Authorities

- Alloa Town Council
- *Clackmannan County Council
- *Clydebank and District Water Trust
- *Dumbarton County Council
- *Dundee Corporation
- Dumbarton Town Council
- *Edinburgh Corporation
- *Fife County Council
- Glasgow Corporation
- *Grangemouth Town Council
- *Inverkeithing Town Council
- *Kirkcaldy Town Council
- Kirkintilloch Town Council
- *Lanark County Council
- *Loch Turret Water Board
- *Newport-on-Tay Town Council
- *Perth County Council
- St Andrews Town Council
- *Stirling County Council
- *Stirlingshire and Falkirk Water Board
- *Stirling Town Council
- *West Lothian Water Board

Professional and Representative Bodies

- Association of County Councils in Scotland
- British Waterways Board (British Transport Commission)
- *British Waterworks Association (Scottish Committee)
- Convention of Royal Burghs
- Federation of British Industries (Scottish Council)
- *Institution of Water Engineers (Scottish Council)
- Scottish Council (Development and Industry)
- Scottish River Purification Boards' Association
- *Society of County Engineers in Scotland
- Tweed River Purification Board

APPENDIX II

WATER RESOURCES OF LOCAL WATER AUTHORITIES IN CENTRAL SCOTLAND

Water Authority	Population	AVAILABLE RESOURCES				PRESENT CONSUMPTION	BALANCE		ESTIMATED TOTAL REQUIREMENTS			
		Safe yield of Authority's own sources m.g.d.	Bulk Supplies		Net supply available for distribution m.g.d.		Total quantity consumed m.g.d.	Surplus available m.g.d.	Deficit to be made up m.g.d.	1971 m.g.d.	1981 m.g.d.	1994 m.g.d.
			Available to Authority m.g.d.	Earmarked for others m.g.d.								
Glasgow Corporation	1,203,400	93.70	—	1.00	92.70	94.71	—	2.01	104.00	113.00	122.00	
Edinburgh Corporation	580,332	98.00	—	—	98.00	95.00	3.00	—	99.00	43.00	47.00	
Dumbarton County Council Glydebank & District Water Trust	47,000	6.57	2.05	—	8.62	3.84	4.78	—	7.20	9.70	10.90	
Cove & Kilmarnock T.C.	58,000	3.05	—	—	3.05	4.54	—	1.49	4.93	5.56	7.00	
Dumbarrow Town Council	1,200	0.44	—	—	0.44	0.10	0.34	—	0.11	0.12	0.12	
Helenburgh Town Council	26,306	4.65	—	—	4.65	2.98	2.27	—	2.78	3.04	3.31	
Kirkcaldy Town Council	10,000	1.50	—	—	1.50	0.81	0.69	—	1.02	1.18	1.35	
Fife County Council	18,257	0.98	—	—	0.98	1.25	—	0.27	1.62	1.90	2.18	
Kinross County Council	151,060	14.84	—	3.56	11.28	7.65	3.63	—	13.58	16.63	20.43	
Dumfries Corporation (Fife County Area)	4,339	0.08	0.06	—	0.14	0.14	0.00	—	0.15	0.17	0.19	
Ellis, Kirkcaldy and St Monastery Jt. Committee	7,056	0.32	—	—	0.32	0.32	0.00	—	0.40	0.51	0.65	
Pittenweem, Kirkcaldy and Anstruther Jt. Committee	3,600	0.46	—	—	0.46	0.30	0.16	—	0.35	0.40	0.45	
Auchtermuchty Town Council	4,500	0.43	—	—	0.43	0.40	0.03	—	0.45	0.50	0.55	
Burnside Town Council	1,350	0.08	—	—	0.08	0.07	0.01	—	0.07	0.08	0.09	
Cowdenbeath Town Council	6,096	1.00	—	—	1.00	0.72	0.28	—	0.78	0.83	0.90	
Cupar Town Council	12,065	0.81	—	—	0.81	0.61	0.20	—	1.00	1.20	1.40	
Dunfermline Town Council	8,500	0.46	—	—	0.46	0.46	0.00	—	0.51	0.58	0.65	
Falkland Town Council	48,300	1.88	1.50	0.05	3.33	2.45	0.88	—	2.85	3.20	3.55	
Inverkeithing Town Council	1,302	0.17	—	—	0.17	0.08	0.09	—	0.09	0.10	0.11	
Kinghorn Town Council	4,124	—	0.43	—	0.43	0.35	0.08	—	0.45	0.50	0.55	
	2,100	0.13	0.10	—	0.23	0.12	0.11	—	0.15	0.18	0.21	

Kilross Town Council	9,400	0.12	—	—	0.12	0.12	0.12	0.00	0.19	0.15	0.18	0.21
Kirkcaldy Town Council	53,000	2.98	0.10	—	2.88	3.01	3.01	—	—	3.94	4.99	6.33
Leslie Town Council	3,462	0.16	—	—	0.16	0.16	0.16	0.01	0.13	0.18	0.21	0.25
Leven Town Council	9,000	1.25	—	—	1.25	0.60	0.60	0.65	0.74	0.89	1.03	1.03
Newburgh Town Council	2,500	0.18	—	—	0.18	0.15	0.15	0.03	0.13	0.17	0.19	0.23
St. Andrews Town Council	11,000	0.88	—	—	0.88	0.77	0.77	0.11	0.95	1.12	1.25	1.25
Lanark County Council	885,000	11.95	0.40	17.78	29.23	29.18	29.18	9.15	26.65	33.65	41.65	41.65
Duer Water Board	28,40	28.40	—	—	0.00	—	—	—	—	—	—	—
Airdrie, Coatbridge and District W.B.	119,000	3.40	—	5.07	8.47	5.70	5.70	2.77	0.01	6.40	7.10	8.00
Biggar Town Council	2,100	0.11	—	—	0.11	0.12	0.12	—	—	0.13	0.14	0.15
Hamilton Town Council	41,000	1.90	—	2.84	4.74	3.26	3.26	1.48	—	3.60	4.00	4.40
Lanark Town Council	8,500	0.40	—	0.40	0.80	0.72	0.72	0.08	0.84	0.96	1.06	1.06
Motherwell & Wishaw T.C.	75,000	4.49	—	3.86	8.35	5.72	5.72	2.65	6.71	7.71	8.71	8.71
Perth County Council (part)	28,500	—	—	2.40	2.40	—	—	2.40	1.40	2.40	2.40	2.40
Abernethy Town Council	601	0.05	—	—	0.05	0.05	0.05	0.00	0.05	0.06	0.07	0.07
Auchtermurder Town Council	2,500	0.12	—	—	0.12	0.13	0.13	—	0.01	0.16	0.21	0.26
Crieff Town Council	6,000	—	—	0.75	0.75	0.38	0.38	0.37	0.38	0.40	0.40	0.40
Doune Town Council	774	0.20	—	—	0.20	0.08	0.08	0.12	0.08	0.08	0.08	0.08
Dumblane Town Council	3,000	0.49	—	—	0.49	0.23	0.23	0.26	0.30	0.35	0.40	0.40
Stirling County Council	19,080	—	—	1.83	1.83	0.68	0.68	1.13	1.50	2.35	3.20	3.20
Clackmannan County Council	17,210	0.28	—	2.40	2.68	0.90	0.90	1.78	3.30	3.61	3.81	3.81
Stirlingshire & Falkirk W.B.	103,000	23.17	12.18	—	10.99	7.98	7.98	3.01	8.50	10.00	11.20	11.20
Loch Turret W.B.	—	11.55	11.55	—	0.00	—	—	—	—	—	—	—
Alloa Town Council	14,980	1.90	—	—	1.90	1.90	1.90	0.00	2.40	2.90	2.90	2.90
Alva Town Council	4,100	0.30	—	—	0.30	0.27	0.27	0.03	0.32	0.35	0.36	0.36
Bridge of Allan Town Council	3,312	0.42	—	—	0.42	0.29	0.29	0.13	0.33	0.34	0.35	0.35
Denny & Dunipace Town Council	9,500	0.80	—	—	0.80	0.75	0.75	0.05	0.84	0.92	1.00	1.00
Dollar Town Council	2,135	0.22	—	—	0.22	0.07	0.07	0.15	0.09	0.10	0.11	0.11
Grovenmouth Town Council	18,924	3.00	1.00	14.00	16.00	10.10	10.10	5.90	20.00	25.00	25.00	25.00
Kilguth Town Council	9,831	0.55	—	—	0.55	0.55	0.55	0.00	0.68	0.81	0.95	0.95
Stirling Town Council	27,000	1.01	—	1.00	2.01	2.80	2.80	—	0.79	3.35	4.30	5.05
Tullisburgh Town Council	3,560	0.26	—	—	0.26	0.32	0.32	—	0.06	0.32	0.39	0.34
West Lothian W.B.	881,000	4.66	—	0.32	4.98	5.05	5.05	—	0.07	12.00	17.00	24.00
Bo'ness Town Council	10,000	0.66	0.15	—	0.51	0.60	0.60	—	0.09	0.83	0.90	1.00
	3,180,796	275.41	58.39	56.79	273.81	290.19	290.19	48.61	289.36	333.91	379.70	379.70

APPENDIX III

LOCAL AUTHORITY AREAS WHICH WOULD BE SUPPLIED BY REGIONAL WATER AUTHORITIES

(see Map at Appendix V)

<i>Regional Water Area</i>	<i>Cities and Counties</i>	<i>Burghs</i>
1. GLASGOW	Glasgow <div> <div> Lanarkshire Perthshire Renfrewshire Stirlingshire </div> <div> } In so far as these landward areas are within the Cor- poration's existing limits of supply </div> </div>	Bearsden Milngavie Rutherglen Barrhead Renfrew
2. DUNBARTONSHIRE	Dunbartonshire Stirlingshire (part)	Clydebank Cove & Kilbereggan Dumbarton Helensburgh Kirkintilloch Kilsyth
3. STIRLINGSHIRE & CLACKMANNAN	Stirlingshire (part) Clackmannan West Lothian (part)	Bridge of Allan Denny & Dunipace Falkirk Grangemouth Stirling Allea Alva Dollar Tillicoultry
4. FIFE & KINROSS	Fife (part) Kinross	Auchtermuchty Buckhaven & Methil Burntisland Cowdenbeath Crail Culross Cupar Dunfermline Elie & Earlsferry Falkland Inverkeithing Kilrenny & Anstruther Kinghorn Kirkcaldy Ladybank Leslie Leven Lochgelly Markinch Newburgh Pitvenneam St. Andrews St. Monance Kinross

5. EDINBURGH, MIDLOTHIAN
AND WEST LOTHIANEdinburgh
Midlothian
West Lothian (part)Bonnyrigg & Lasswade
Dalkeith
Loanhead
Musselburgh
Penicuik
Armadale
Bathgate
Bo'ness
Lindlithgow
Queensferry
Whithorn

6. LANARKSHIRE

Lanarkshire

Airdrie
Biggar
Coatbridge
Hamilton
Lanark
Motherwell & Wishaw

SCOTTISH DEVELOPMENT DEPARTMENT

*The Water Service
in Central Scotland*

REPORT OF
THE SCOTTISH WATER ADVISORY
COMMITTEE

EDINBURGH

HER MAJESTY'S STATIONERY OFFICE

1963

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Report of the Scottish Water Advisory Committee

TO THE RT. HON. MICHAEL NOBLE, M.P.,
Secretary of State for Scotland

We have the honour to submit our report on the remit in the following terms which your predecessor, the Right Honourable John S. MacLay, O.H., C.M.G., M.P., made to us on our appointment as the reconstituted Scottish Water Advisory Committee:

"To examine the local administrative control over the development and distribution of water supplies in Central Scotland in the light of present and potential demands and to make recommendations as to how far it might be desirable to draw together local water authorities in the area, with a view to facilitating measures for securing an efficient and economic supply of water adequate for all purposes throughout the area."

The report is the result of some 14 months of close study of the present state of the water service in Central Scotland and of the shape its future control should take, looking alike to the projected development of new sources and to the importance of this area in the growth of Scotland's economy as a whole.

To ensure that we did not lack the benefit of the accumulated knowledge and experience—both technical and administrative—that exists in this field, we took pains to gather the views by written and oral evidence of those who were qualified and interested to help us in our investigation. As a result, an impressive body of factual information and of informed opinion was put at our disposal, and we should like to take this opportunity to thank the local water authorities, the associations of local authorities, individual local authorities, and the professional, representative and other interested bodies who so readily gave us their views.

Our recommendations are summarised at pages 55–58 of the report. If given effect to they will involve the replacement of 53 local water authorities in the Counties of Dunbarton, Lanark, Stirling, West Lothian, Clackmannan, Fife and Kinross by six regional water authorities comprising four new "source-to-tap" regional water boards responsible for both the supply and the distribution of water in their respective areas, and the Corporations of Glasgow and Edinburgh who supply and distribute water not only within their own city boundaries but also in neighbouring burghal and landward areas and who already perform the functions of source-to-tap regional water boards in these areas. We also recommend the setting up of a Water Development Board for the co-ordinated development of all new sources designed to provide bulk supplies to these regional water authorities in common.

A major re-organisation of the administrative structure of the water service in Central Scotland to remedy existing defects and anomalies has for long been

regarded as desirable; but in our view it is now not only desirable for this reason but urgently necessary as the essential counterpart of the bold and imaginative engineering project at present being considered to bring water into this wide area from Loch Lomond, which, if approved, would be the Water Development Board's first undertaking.

We are deeply conscious that we owe a debt of thanks to the officials who so ably helped us. The marshalling of the voluminous material submitted to us, its presentation for our consideration, the writing of minutes and reports and the general conduct of our affairs throughout the investigation threw a heavy burden on our Secretary, Mr J. B. More, and we are glad to acknowledge our grateful appreciation of his efficient and untiring services on our behalf. We offer our warm thanks, too, to Mr T. V. Hughson, the Assistant Secretary in charge of the Water and Sewerage Division of the Scottish Development Department, and to Mr J. W. Shiell, the Deputy Chief Engineer of the Department, for attending all our meetings and advising us on the many administrative and technical matters that demanded our consideration. We are indebted also to Mr K. B. T. Mackenzie of the Department who gave valuable assistance to our Secretary during our inquiries.

(Signed) CRAIG MITCHELL (*Chairman*)

P. L. AITKEN

JOHN C. O. BURNS

SIMON F. CARRUTHERS

JOHN W. FLETCHER

THOS. GIBB

GEORGE D. GRANT

*AMES L. IMRIE

THOMAS W. LESLIE

A. H. MARTIN

ROBERT MCGILL

GEORGE SHARP

A. E. R. TAYLOR

IAN B. L. WEIR

* In view of his appointment as City Chamberlain of Edinburgh, Mr A. L. Imrie, with the full agreement of the remaining members of the Committee, took no part in the discussions which led to the recommendation in paragraph 138 of the report that the Corporation's limits of supply should be extended to include almost the whole of the County of West Lothian.

CRAIG MITCHELL (*Chairman*)

J. B. MORE (*Secretary*)

22nd March, 1963.